# APPENDIX 6.2

Opening Year (2016) With Project Conditions
Intersection Operations Analysis Worksheets

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 0.674 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 47.9 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Added Vol: | 2 | 0 | 12 | 12 | 0 | 2 | 2 | 122 | 2 | 10 | 49 | 10 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 185 | 153 | 29 | 264 | 241 | 107 | 147 | 686 | 293 | 45 | 523 | 139 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.93 | 0.93 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.68 | 0.32 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2962 | 561 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.05 | 0.05 | 0.15 | 0.07 | 0.07 | 0.09 | 0.20 | 0.19 | 0.03 | 0.29 | 0.09 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.28 | 0.28 | 0.17 | 0.32 | 0.32 | 0.10 | 0.32 | 0.32 | 0.10 | 0.32 | 0.32 |
| Volume/Cap: | 0.86 | 0.20 | 0.20 | 0.89 | 0.22 | 0.22 | 0.89 | 0.63 | 0.60 | 0.26 | 0.89 | 0.28 |
| Delay/Veh: | 77.3 | 33.5 | 33.5 | 75.0 | 29.8 | 29.9 | 93.6 | 36.1 | 36.6 | 50.4 | 54.2 | 30.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 77.3 | 33.5 | 33.5 | 75.0 | 29.8 | 29.9 | 93.6 | 36.1 | 36.6 | 50.4 | 54.2 | 30.5 |
| LOS by Move: | E | C | C | E | C | C | F | D | D | D | D | C |
| HCM2kAvgQ: | 10 | 3 | 3 | 13 | 4 | 3 | 9 | 12 | 10 | 2 | 23 | 4 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.381 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.8 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Lanes: | 0 | 0 | 1! | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1! | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 7 | 13 | 3 | | 92 | 8 | 90 | | 103 | 113 | 10 | | 6 | 91 | 60 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 7 | 13 | 3 | | 92 | 8 | 90 | | 103 | 113 | 10 | | 6 | 91 | 60 | |
| Added Vol: | 0 | 0 | 0 | | 7 | 0 | 0 | | 0 | 14 | 0 | | 0 | 10 | 5 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 7 | 13 | 3 | | 99 | 8 | 90 | | 103 | 127 | 10 | | 6 | 101 | 65 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.88 | 0.88 | 0.88 | | 0.88 | 0.88 | 0.88 | | 0.88 | 0.88 | 0.88 | | 0.88 | 0.88 | 0.88 | |
| PHF Volume: | 8 | 15 | 3 | | 113 | 9 | 103 | | 118 | 145 | 11 | | 7 | 115 | 74 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 8 | 15 | 3 | | 113 | 9 | 103 | | 118 | 145 | 11 | | 7 | 115 | 74 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 8 | 15 | 3 | | 113 | 9 | 103 | | 118 | 145 | 11 | | 7 | 115 | 74 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Lanes: | 0.30 | 0.57 | 0.13 | | 1.00 | 0.08 | 0.92 | | 0.43 | 0.53 | 0.04 | | 0.03 | 0.59 | 0.38 | |
| Final Sat.: | 184 | 342 | 79 | | 561 | 56 | 627 | | 309 | 381 | 30 | | 26 | 434 | 279 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | | 0.20 | 0.16 | 0.16 | | 0.38 | 0.38 | 0.38 | | 0.27 | 0.27 | 0.27 | |
| Crit Moves: | | | **** | | **** | | | | | **** | | | **** | | | |
| Delay/Veh: | 8.6 | 8.6 | 8.6 | | 10.3 | 8.6 | 8.6 | | 10.6 | 10.6 | 10.6 | | 9.3 | 9.3 | 9.3 | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 8.6 | 8.6 | 8.6 | | 10.3 | 8.6 | 8.6 | | 10.6 | 10.6 | 10.6 | | 9.3 | 9.3 | 9.3 | |
| LOS by Move: | A | A | A | | B | A | A | | B | B | B | | A | A | A | |
| ApproachDel: | 8.6 | | | | 9.4 | | | | 10.6 | | | | 9.3 | | | |
| Delay Adj: | 1.00 | | | | 1.00 | | | | 1.00 | | | | 1.00 | | | |
| ApprAdjDel: | 8.6 | | | | 9.4 | | | | 10.6 | | | | 9.3 | | | |
| LOS by Appr: | A | | | | A | | | | B | | | | A | | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | | 0.2 | 0.2 | 0.2 | | 0.6 | 0.6 | 0.6 | | 0.3 | 0.3 | 0.3 | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 33 | 81 | 8 | 320 | 171 | 200 | 23 | 239 | 261 | 159 | 219 | 47 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.92 | | 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) | 1805 | 5106 | | 3072 | 3289 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5106 | | 3072 | 3289 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Adj. Flow (vph) | 39 | 96 | 10 | 381 | 204 | 238 | 27 | 285 | 311 | 189 | 261 | 56 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| Lane Group Flow (vph) | 39 | 100 | 0 | 381 | 314 | 0 | 27 | 285 | 311 | 189 | 261 | 13 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 12% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 3.2 | 48.9 | | 7.3 | 53.0 | | 10.8 | 32.8 | 32.8 | 5.0 | 27.0 | 27.0 |
| Effective Green, g (s) | 3.2 | 48.9 | | 7.3 | 53.0 | | 10.8 | 32.8 | 32.8 | 5.0 | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.03 | 0.43 | | 0.06 | 0.46 | | 0.09 | 0.29 | 0.29 | 0.04 | 0.23 | 0.23 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 50 | 2171 | | 195 | 1515 | | 169 | 1029 | 404 | 78 | 847 | 373 |
| v/s Ratio Prot | 0.02 | 0.02 | | c0.12 | c0.10 | | 0.01 | 0.08 | | c0.10 | 0.07 | |
| v/s Ratio Perm | | | | | | | | | c0.22 | | | 0.01 |
| v/c Ratio | 0.78 | 0.05 | | 1.95 | 0.21 | | 0.16 | 0.28 | 0.77 | 2.42 | 0.31 | 0.04 |
| Uniform Delay, d1 | 55.6 | 19.4 | | 53.9 | 18.5 | | 47.9 | 31.9 | 37.6 | 55.0 | 36.3 | 34.0 |
| Progression Factor | 1.00 | 1.00 | | 0.86 | 0.19 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 50.7 | 0.0 | | 445.5 | 0.3 | | 0.2 | 0.1 | 7.8 | 677.5 | 0.1 | 0.0 |
| Delay (s) | 106.2 | 19.4 | | 491.5 | 3.7 | | 48.1 | 32.0 | 45.4 | 732.5 | 36.4 | 34.0 |
| Level of Service | F | B | | F | A | | D | C | D | F | D | C |
| Approach Delay (s) | | 42.8 | | | 229.6 | | | 39.4 | | | 296.1 | |
| Approach LOS | | D | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 176.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 75.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): 8.1 Worst Case Level Of Service: F[224.4]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 | | | | | | | | | | | | |
| Added Vol: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 150 | 0 | 8 | 71 | 8 | | | | | | | | | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Initial Fut: | 1 | 3 | 27 | 51 | 3 | 8 | 5 | 980 | 11 | 11 | 685 | 46 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | | | | | |
| PHF Volume: | 1 | 3 | 28 | 53 | 3 | 8 | 5 | 1018 | 11 | 11 | 711 | 48 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| FinalVolume: | 1 | 3 | 28 | 53 | 3 | 8 | 5 | 1018 | 11 | 11 | 711 | 48 | | | | | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 1798 | 1816 | 1023 | 1807 | 1798 | 735 | 759 | xxxx | xxxxx | 1029 | xxxx | xxxxx | | | | | | | | | | | | |
| Potent Cap.: | 63 | 79 | 289 | 62 | 81 | 423 | 862 | xxxx | xxxxx | 683 | xxxx | xxxxx | | | | | | | | | | | | |
| Move Cap.: | 59 | 77 | 289 | 53 | 79 | 423 | 862 | xxxx | xxxxx | 683 | xxxx | xxxxx | | | | | | | | | | | | |
| Volume/Cap: | 0.02 | 0.04 | 0.10 | 1.00 | 0.04 | 0.02 | 0.01 | xxxx | xxxx | 0.02 | xxxx | xxxx | | | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 0.3 | xxxx | xxxx | 0.1 | 0.0 | xxxx | xxxxx | 0.1 | xxxx | xxxxx | | | | | | | | | | | | |
| Control Del: | xxxxx | xxxx | 18.8 | xxxxx | xxxx | 13.7 | 9.2 | xxxx | xxxxx | 10.4 | xxxx | xxxxx | | | | | | | | | | | | |
| LOS by Move: | * | * | C | * | * | B | A | * | * | B | * | * | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 72 | xxxx | xxxxx | 54 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | 4.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | 58.4 | xxxx | xxxxx | 255.6 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | F | * | * | F | * | * | * | * | * | * | * | * | | | | | | | | | | | | |
| ApproachDel: | 23.9 | | | 224.4 | | | xxxxxx | | | xxxxxx | | | | | | | | | | | | | | |
| ApproachLOS: | C | | | F | | | * | | | * | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 90 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 12 Average Delay (sec/veh): 17.1
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 558 | 59 | 17 | 4 | 59 | 68 | 98 | 8 | 739 | 9 | 8 | 7 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 558 | 59 | 17 | 4 | 59 | 68 | 98 | 8 | 739 | 9 | 8 | 7 |
| Added Vol: | 83 | 8 | 0 | 0 | 10 | 4 | 10 | 0 | 160 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 641 | 67 | 17 | 4 | 69 | 72 | 108 | 8 | 899 | 9 | 8 | 7 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 653 | 68 | 17 | 4 | 70 | 73 | 110 | 8 | 916 | 9 | 8 | 7 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 653 | 68 | 17 | 4 | 70 | 73 | 110 | 8 | 916 | 9 | 8 | 7 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 653 | 68 | 17 | 4 | 70 | 73 | 110 | 8 | 916 | 9 | 8 | 7 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 0.85 | 0.74 | 0.74 | 0.85 | 0.90 | 0.90 | 0.90 |
| Lanes: | 1.00 | 0.80 | 0.20 | 1.00 | 1.00 | 1.00 | 0.93 | 0.07 | 1.00 | 0.38 | 0.33 | 0.29 |
| Final Sat.: | 1805 | 1470 | 373 | 1805 | 1900 | 1615 | 1311 | 97 | 1615 | 642 | 571 | 500 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.36 | 0.05 | 0.05 | 0.00 | 0.04 | 0.05 | 0.08 | 0.08 | 0.57 | 0.01 | 0.01 | 0.01 |
| Crit Moves: | **** | | | | **** | | | | **** | | | |
| Green/Cycle: | 0.48 | 0.48 | 0.48 | 0.11 | 0.11 | 0.11 | 0.27 | 0.27 | 0.76 | 0.27 | 0.27 | 0.27 |
| Volume/Cap: | 0.75 | 0.10 | 0.10 | 0.02 | 0.33 | 0.41 | 0.31 | 0.31 | 0.75 | 0.05 | 0.05 | 0.05 |
| Delay/Veh: | 22.6 | 12.7 | 12.7 | 35.7 | 37.9 | 38.8 | 26.4 | 26.4 | 8.9 | 24.1 | 24.1 | 24.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 22.6 | 12.7 | 12.7 | 35.7 | 37.9 | 38.8 | 26.4 | 26.4 | 8.9 | 24.1 | 24.1 | 24.1 |
| LOS by Move: | C | B | B | D | D | D | C | C | A | C | C | C |
| HCM2kAvgQ: | 16 | 1 | 1 | 0 | 2 | 2 | 3 | 3 | 16 | 1 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 30 | 124 | 19 | 471 | 200 | 669 | 24 | 54 | 299 | 844 | 67 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3121 | | 3242 | 1759 | 2808 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3121 | | 3242 | 1759 | 2808 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 32 | 132 | 20 | 501 | 213 | 712 | 26 | 57 | 318 | 898 | 71 | 18 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 0 | 307 | 0 | 0 | 190 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 32 | 140 | 0 | 501 | 213 | 405 | 26 | 57 | 128 | 898 | 71 | 9 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 15% | 0% | 8% | 8% | 0% | 0% | 0% | 15% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 3.7 | 14.8 | | 20.0 | 30.4 | 68.2 | 4.4 | 28.3 | 48.3 | 37.8 | 61.7 | 61.7 |
| Effective Green, g (s) | 3.7 | 14.8 | | 20.0 | 30.4 | 68.2 | 4.4 | 28.3 | 48.3 | 37.8 | 61.7 | 61.7 |
| Actuated g/C Ratio | 0.03 | 0.12 | | 0.17 | 0.25 | 0.57 | 0.04 | 0.24 | 0.40 | 0.31 | 0.51 | 0.51 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 107 | 384 | | 540 | 445 | 1595 | 66 | 448 | 565 | 1103 | 1856 | 815 |
| v/s Ratio Prot | 0.01 | 0.04 | | c0.15 | c0.12 | 0.08 | 0.01 | 0.03 | c0.04 | c0.26 | 0.02 | |
| v/s Ratio Perm | | | | | | 0.06 | | | 0.05 | | | 0.01 |
| v/c Ratio | 0.30 | 0.36 | | 0.93 | 0.48 | 0.25 | 0.39 | 0.13 | 0.23 | 0.81 | 0.04 | 0.01 |
| Uniform Delay, d1 | 56.9 | 48.3 | | 49.3 | 38.1 | 13.1 | 56.5 | 36.1 | 23.6 | 37.9 | 14.4 | 14.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.6 | 0.2 | | 21.9 | 0.3 | 0.0 | 1.4 | 0.6 | 0.1 | 4.5 | 0.0 | 0.0 |
| Delay (s) | 57.5 | 48.5 | | 71.2 | 38.4 | 13.1 | 57.9 | 36.7 | 23.6 | 42.3 | 14.5 | 14.3 |
| Level of Service | E | D | | E | D | B | E | D | C | D | B | B |
| Approach Delay (s) | | 50.1 | | | 37.3 | | | 27.7 | | | 39.8 | |
| Approach LOS | | D | | | D | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 37.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 61.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 40 | 437 | 24 | 135 | 599 | 248 | 20 | 62 | 90 | 215 | 72 | 71 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.96 | | 1.00 | 0.91 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4779 | | 3502 | 3249 | | 1798 | 3257 | | 1798 | 3313 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.65 | 1.00 | | 0.64 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4779 | | 3502 | 3249 | | 1221 | 3257 | | 1209 | 3313 | |
| Peak-hour factor, PHF | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 47 | 514 | 28 | 159 | 705 | 292 | 24 | 73 | 106 | 253 | 85 | 84 |
| RTOR Reduction (vph) | 0 | 4 | 0 | 0 | 30 | 0 | 0 | 79 | 0 | 0 | 63 | 0 |
| Lane Group Flow (vph) | 47 | 538 | 0 | 159 | 967 | 0 | 24 | 100 | 0 | 253 | 106 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 8% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 6.5 | 58.2 | | 11.4 | 63.1 | | 28.9 | 28.9 | | 28.9 | 28.9 | |
| Effective Green, g (s) | 6.5 | 58.2 | | 11.4 | 63.1 | | 28.9 | 28.9 | | 28.9 | 28.9 | |
| Actuated g/C Ratio | 0.06 | 0.51 | | 0.10 | 0.55 | | 0.25 | 0.25 | | 0.25 | 0.25 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 102 | 2418 | | 347 | 1782 | | 306 | 818 | | 303 | 832 | |
| v/s Ratio Prot | c0.03 | 0.11 | | 0.05 | c0.30 | | | 0.03 | | | 0.03 | |
| v/s Ratio Perm | | | | | | | 0.02 | | | c0.21 | | |
| v/c Ratio | 0.46 | 0.22 | | 0.46 | 0.54 | | 0.08 | 0.12 | | 0.83 | 0.13 | |
| Uniform Delay, d1 | 52.6 | 15.8 | | 48.9 | 16.7 | | 32.9 | 33.2 | | 40.8 | 33.3 | |
| Progression Factor | 0.81 | 0.50 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.1 | 0.0 | | 0.4 | 1.2 | | 0.0 | 0.0 | | 17.0 | 0.0 | |
| Delay (s) | 42.8 | 8.0 | | 49.2 | 17.9 | | 32.9 | 33.3 | | 57.8 | 33.3 | |
| Level of Service | D | A | | D | B | | C | C | | E | C | |
| Approach Delay (s) | | 10.8 | | | 22.2 | | | 33.2 | | | 48.0 | |
| Approach LOS | | B | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 68.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 310 | 227 | 43 | 231 | 0 | 0 | 0 | 0 | 157 | 0 | 104 |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 0 | 378 | 277 | 52 | 282 | 0 | 0 | 0 | 0 | 191 | 0 | 127 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 378 | 277 | 52 | 282 | 318 |
| Volume Left (vph) | 0 | 0 | 52 | 0 | 191 |
| Volume Right (vph) | 0 | 277 | 0 | 0 | 127 |
| Hadj (s) | 0.05 | -0.48 | 0.62 | 0.07 | -0.06 |
| Departure Headway (s) | 5.6 | 3.2 | 6.7 | 6.1 | 5.7 |
| Degree Utilization, x | 0.59 | 0.25 | 0.10 | 0.48 | 0.51 |
| Capacity (veh/h) | 619 | 1112 | 517 | 567 | 584 |
| Control Delay (s) | 16.3 | 7.2 | 9.2 | 13.3 | 14.5 |
| Approach Delay (s) | 12.5 | | 12.7 | | 14.5 |
| Approach LOS | B | | B | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 13.0 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 754 | 512 | 688 | 1273 | 0 | 0 | 0 | 0 | 375 | 0 | 202 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.96 | 1.00 |
| Satd. Flow (prot) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1457 | 1434 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.96 | 1.00 |
| Satd. Flow (perm) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1457 | 1434 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 0 | 847 | 575 | 773 | 1430 | 0 | 0 | 0 | 0 | 421 | 0 | 227 |
| RTOR Reduction (vph) | 0 | 0 | 297 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 59 |
| Lane Group Flow (vph) | 0 | 847 | 278 | 773 | 1430 | 0 | 0 | 0 | 0 | 223 | 164 | 143 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 4% | 4% | 3% | 0% | 0% | 0% | 0% | 12% | 0% | 7% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 46.5 | 46.5 | 28.1 | 79.2 | | | | | 19.8 | 19.8 | 19.8 |
| Effective Green, g (s) | | 46.5 | 46.5 | 28.1 | 79.2 | | | | | 19.8 | 19.8 | 19.8 |
| Actuated g/C Ratio | | 0.42 | 0.42 | 0.26 | 0.72 | | | | | 0.18 | 0.18 | 0.18 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1439 | 656 | 860 | 2523 | | | | | 275 | 262 | 258 |
| v/s Ratio Prot | | 0.25 | | c0.23 | c0.41 | | | | | c0.15 | 0.11 | 0.10 |
| v/s Ratio Perm | | | 0.18 | | | | | | | | | |
| v/c Ratio | | 0.59 | 0.42 | 0.90 | 0.57 | | | | | 0.81 | 0.63 | 0.55 |
| Uniform Delay, d1 | | 24.4 | 22.3 | 39.6 | 7.3 | | | | | 43.3 | 41.7 | 41.1 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 1.8 | 2.0 | 11.8 | 0.9 | | | | | 15.6 | 3.3 | 1.5 |
| Delay (s) | | 26.2 | 24.3 | 51.4 | 8.2 | | | | | 58.9 | 45.0 | 42.5 |
| Level of Service | | C | C | D | A | | | | | E | D | D |
| Approach Delay (s) | | 25.4 | | | 23.4 | | | 0.0 | | | 49.0 | |
| Approach LOS | | C | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 27.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 76.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 236 | 272 | 65 | 485 | 0 | 0 | 0 | 0 | 7 | 0 | 70 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 0 | 284 | 328 | 78 | 584 | 0 | 0 | 0 | 0 | 8 | 0 | 84 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 584 | | | 612 | | | 1067 | 1025 | 284 | 1025 | 1353 | 584 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 584 | | | 612 | | | 1067 | 1025 | 284 | 1025 | 1353 | 584 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 95 | 100 | 84 |
| cM capacity (veh/h) | 1000 | | | 939 | | | 158 | 217 | 759 | 163 | 139 | 515 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 284 | 328 | 78 | 584 | 93 |
| Volume Left | 0 | 0 | 78 | 0 | 8 |
| Volume Right | 0 | 328 | 0 | 0 | 84 |
| cSH | 1700 | 1700 | 939 | 1700 | 567 |
| Volume to Capacity | 0.17 | 0.19 | 0.08 | 0.34 | 0.16 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 15 |
| Control Delay (s) | 0.0 | 0.0 | 9.2 | 0.0 | 14.7 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.1 | | 14.7 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 52.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 533 | 209 | 627 | 649 | 0 | 0 | 0 | 0 | 601 | 2 | 334 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3471 | 1538 | 1770 | 3505 | | | | | 3335 | 1397 | 1393 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3471 | 1538 | 1770 | 3505 | | | | | 3335 | 1397 | 1393 |
| Peak-hour factor, PHF | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 0 | 650 | 255 | 765 | 791 | 0 | 0 | 0 | 0 | 733 | 2 | 407 |
| RTOR Reduction (vph) | 0 | 0 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 | 161 |
| Lane Group Flow (vph) | 0 | 650 | 74 | 765 | 791 | 0 | 0 | 0 | 0 | 733 | 44 | 42 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 5% | 2% | 3% | 0% | 0% | 0% | 0% | 5% | 0% | 8% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.38 | 0.71 | | | | | 0.21 | 0.21 | 0.21 |
| Clearance Time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1003 | 444 | 669 | 2473 | | | | | 686 | 287 | 286 |
| v/s Ratio Prot | | c0.19 | | c0.43 | 0.23 | | | | | c0.22 | 0.03 | |
| v/s Ratio Perm | | | 0.05 | | | | | | | | | 0.03 |
| v/c Ratio | | 0.65 | 0.17 | 1.14 | 0.32 | | | | | 1.07 | 0.15 | 0.15 |
| Uniform Delay, d1 | | 37.3 | 31.8 | 37.3 | 6.7 | | | | | 47.6 | 39.1 | 39.0 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.15 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 3.2 | 0.8 | 74.5 | 0.2 | | | | | 54.1 | 0.1 | 0.1 |
| Delay (s) | | 40.5 | 32.7 | 111.6 | 7.9 | | | | | 101.8 | 39.2 | 39.1 |
| Level of Service | | D | C | F | A | | | | | F | D | D |
| Approach Delay (s) | | 38.3 | | | 58.9 | | | 0.0 | | | 79.3 | |
| Approach LOS | | D | | | E | | | A | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 60.2 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.96 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 88.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 99 | 368 | 0 | 0 | 150 | 108 | 124 | 0 | 137 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 141 | 526 | 0 | 0 | 214 | 154 | 177 | 0 | 196 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 369 | | | 526 | | | 1100 | 1177 | 526 | 1296 | 1100 | 291 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 369 | | | 526 | | | 1100 | 1177 | 526 | 1296 | 1100 | 291 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 0 | 100 | 65 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1158 | | | 1051 | | | 170 | 169 | 556 | 83 | 188 | 753 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 141 | 526 | 369 | 373 |
| Volume Left | 141 | 0 | 0 | 177 |
| Volume Right | 0 | 0 | 154 | 196 |
| cSH | 1158 | 1700 | 1700 | 268 |
| Volume to Capacity | 0.12 | 0.31 | 0.22 | 1.39 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 502 |
| Control Delay (s) | 8.5 | 0.0 | 0.0 | 233.9 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 1.8 | | 0.0 | 233.9 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 62.8 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 106 | 1024 | 0 | 0 | 1473 | 522 | 490 | 0 | 607 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.89 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (prot) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1488 | 1490 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (perm) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1488 | 1490 | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 120 | 1164 | 0 | 0 | 1674 | 593 | 557 | 0 | 690 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 336 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 120 | 1164 | 0 | 0 | 1674 | 257 | 434 | 349 | 336 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 13% | 7% | 0% | 0% | 4% | 7% | 1% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 11.1 | 54.7 | | | 39.0 | 39.0 | 24.3 | 24.3 | 24.3 | | | |
| Effective Green, g (s) | 11.1 | 54.7 | | | 39.0 | 39.0 | 24.3 | 24.3 | 24.3 | | | |
| Actuated g/C Ratio | 0.12 | 0.61 | | | 0.43 | 0.43 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 196 | 2946 | | | 2161 | 641 | 458 | 401 | 402 | | | |
| v/s Ratio Prot | c0.08 | 0.24 | | | c0.34 | | c0.26 | 0.23 | 0.23 | | | |
| v/s Ratio Perm | | | | | | 0.17 | | | | | | |
| v/c Ratio | 0.61 | 0.40 | | | 0.77 | 0.40 | 0.95 | 0.87 | 0.84 | | | |
| Uniform Delay, d1 | 37.4 | 9.1 | | | 21.8 | 17.5 | 32.2 | 31.3 | 31.0 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 3.9 | 0.4 | | | 2.8 | 1.9 | 28.6 | 17.3 | 13.3 | | | |
| Delay (s) | 41.4 | 9.5 | | | 24.5 | 19.4 | 60.9 | 48.6 | 44.3 | | | |
| Level of Service | D | A | | | C | B | E | D | D | | | |
| Approach Delay (s) | | 12.5 | | | 23.2 | | | 51.5 | | | 0.0 | |
| Approach LOS | | B | | | C | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 27.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 76.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 113 | 130 | 0 | 0 | 194 | 4 | 356 | 0 | 102 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 136 | 157 | 0 | 0 | 234 | 5 | 429 | 0 | 123 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 239 | | | 157 | | | 665 | 667 | 157 | 788 | 665 | 236 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 239 | | | 157 | | | 665 | 667 | 157 | 788 | 665 | 236 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 0 | 100 | 86 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1311 | | | 1436 | | | 343 | 342 | 894 | 247 | 343 | 808 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 136 | 157 | 239 | 552 |
| Volume Left | 136 | 0 | 0 | 429 |
| Volume Right | 0 | 0 | 5 | 123 |
| cSH | 1311 | 1700 | 1700 | 397 |
| Volume to Capacity | 0.10 | 0.09 | 0.14 | 1.39 |
| Queue Length 95th (ft) | 9 | 0 | 0 | 675 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 217.3 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 3.8 | | 0.0 | 217.3 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 111.7 | | |
| Intersection Capacity Utilization | 52.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 273 | 861 | 0 | 0 | 1079 | 1392 | 197 | 2 | 377 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | | 1.00 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.94 | 0.85 | | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 4988 | | | 3247 | 1470 | | 1647 | 2760 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 4988 | | | 3247 | 1470 | | 1647 | 2760 | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 310 | 978 | 0 | 0 | 1226 | 1582 | 224 | 2 | 428 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 59 | 260 | 0 | 0 | 292 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 310 | 978 | 0 | 0 | 1879 | 610 | 0 | 226 | 136 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 4% | 0% | 0% | 1% | 0% | 10% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 90.8 | | | 70.8 | 70.8 | | 18.6 | 18.6 | | | |
| Effective Green, g (s) | 15.4 | 90.8 | | | 70.8 | 70.8 | | 18.6 | 18.6 | | | |
| Actuated g/C Ratio | 0.13 | 0.76 | | | 0.59 | 0.59 | | 0.16 | 0.16 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 423 | 3774 | | | 1915 | 867 | | 255 | 427 | | | |
| v/s Ratio Prot | c0.09 | 0.20 | | | c0.58 | | | c0.14 | | | | |
| v/s Ratio Perm | | | | | | 0.42 | | | 0.05 | | | |
| v/c Ratio | 0.73 | 0.26 | | | 0.98 | 0.70 | | 0.89 | 0.32 | | | |
| Uniform Delay, d1 | 50.3 | 4.4 | | | 24.0 | 17.3 | | 49.7 | 45.1 | | | |
| Progression Factor | 1.91 | 1.33 | | | 1.08 | 2.82 | | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 8.3 | 0.1 | | | 3.2 | 0.4 | | 27.9 | 0.2 | | | |
| Delay (s) | 104.5 | 5.9 | | | 29.1 | 49.1 | | 77.6 | 45.2 | | | |
| Level of Service | F | A | | | C | D | | E | D | | | |
| Approach Delay (s) | | 29.6 | | | 35.3 | | | 56.4 | | | 0.0 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.7 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 88.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[ 10.5]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 61 | 11 | | 4 | 74 | | 0 | | 0 | 0 | | 0 | | 0 | 22 | | 0 | | 2 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Initial Bse: | 0 | 61 | 11 | | 4 | 74 | | 0 | | 0 | 0 | | 0 | | 0 | 22 | | 0 | | 2 |
| Added Vol: | 0 | 7 | 10 | | 0 | 9 | | 0 | | 0 | 0 | | 0 | | 0 | 12 | | 0 | | 0 |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 68 | 21 | | 4 | 83 | | 0 | | 0 | 0 | | 0 | | 0 | 34 | | 0 | | 2 |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.57 | 0.57 | 0.57 | | 0.57 | 0.57 | | 0.57 | | 0.57 | 0.57 | | 0.57 | | 0.57 | 0.57 | | 0.57 | | 0.57 |
| PHF Volume: | 0 | 120 | 37 | | 7 | 146 | | 0 | | 0 | 0 | | 0 | | 0 | 60 | | 0 | | 4 |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 120 | 37 | | 7 | 146 | | 0 | | 0 | 0 | | 0 | | 0 | 60 | | 0 | | 4 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | | xxxxx | | 7.1 | 6.5 | | 6.2 | | 6.4 | 6.5 | | 6.2 | | |
| FollowUpTim: | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | | 157 | xxxx | | xxxxx | | 301 | 317 | | 146 | | 280 | 280 | | 120 | | |
| Potent Cap.: | xxxx | xxxx | xxxxx | | 1435 | xxxx | | xxxxx | | 656 | 602 | | 906 | | 714 | 631 | | 937 | | |
| Move Cap.: | xxxx | xxxx | xxxxx | | 1435 | xxxx | | xxxxx | | 651 | 599 | | 906 | | 711 | 628 | | 937 | | |
| Volume/Cap: | xxxx | xxxx | xxxx | | 0.00 | xxxx | | xxxx | | 0.00 | 0.00 | | 0.00 | | 0.08 | 0.00 | | 0.00 | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | | 0.0 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | |
| Control Del: | xxxxx | xxxx | xxxxx | | 7.5 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | |
| LOS by Move: | * | * | * | | A | * | | * | | * | * | | * | | * | * | | * | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | 0 | | xxxxx | | xxxx | 721 | | xxxxx | | |
| SharedQueue: | 0.0 | xxxx | xxxxx | | 0.0 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | 0.3 | | xxxxx | | |
| Shrd ConDel: | 7.2 | xxxx | xxxxx | | 7.5 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | 10.5 | | xxxxx | | |
| Shared LOS: | A | * | * | | A | * | | * | | * | * | | * | | * | B | | * | | |
| ApproachDel: | xxxxxx | | | | xxxxxx | | | | | xxxxxx | | | | | 10.5 | | | | | |
| ApproachLOS: | * | | | | * | | | | | * | | | | | B | | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 431 | 1878 | 318 | 153 | 1383 | 100 | 237 | 121 | 160 | 59 | 74 | 375 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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) | 1805 | 5036 | 1583 | 1805 | 6346 | 1583 | 1805 | 1900 | 1586 | 1805 | 1900 | 1603 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.71 | 1.00 | 1.00 | 0.64 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5036 | 1583 | 1805 | 6346 | 1583 | 1344 | 1900 | 1586 | 1219 | 1900 | 1603 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 444 | 1936 | 328 | 158 | 1426 | 103 | 244 | 125 | 165 | 61 | 76 | 387 |
| RTOR Reduction (vph) | 0 | 0 | 138 | 0 | 0 | 67 | 0 | 0 | 121 | 0 | 0 | 11 |
| Lane Group Flow (vph) | 444 | 1936 | 190 | 158 | 1426 | 36 | 244 | 125 | 44 | 61 | 76 | 376 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Perm | NA | Perm | Perm | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | 5 |
| Permitted Phases | | | 2 | | | 6 | 8 | | 8 | 4 | | 4 |
| Actuated Green, G (s) | 33.9 | 65.7 | 65.7 | 14.0 | 45.8 | 45.8 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 68.6 |
| Effective Green, g (s) | 33.9 | 65.7 | 65.7 | 14.0 | 45.8 | 45.8 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 68.6 |
| Actuated g/C Ratio | 0.26 | 0.51 | 0.51 | 0.11 | 0.35 | 0.35 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.53 |
| Clearance Time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 470 | 2545 | 800 | 194 | 2235 | 557 | 358 | 507 | 423 | 325 | 507 | 845 |
| v/s Ratio Prot | c0.25 | c0.38 | | 0.09 | 0.22 | | | 0.07 | | | 0.04 | 0.12 |
| v/s Ratio Perm | | | 0.12 | | | 0.02 | c0.18 | | 0.03 | 0.05 | | 0.12 |
| v/c Ratio | 0.94 | 0.76 | 0.24 | 0.81 | 0.64 | 0.07 | 0.68 | 0.25 | 0.10 | 0.19 | 0.15 | 0.45 |
| Uniform Delay, d1 | 47.1 | 25.8 | 18.1 | 56.7 | 35.2 | 27.9 | 42.7 | 37.4 | 35.9 | 36.8 | 36.4 | 19.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 27.6 | 2.2 | 0.7 | 21.3 | 1.4 | 0.2 | 10.1 | 1.2 | 0.5 | 1.3 | 0.6 | 0.1 |
| Delay (s) | 74.8 | 28.0 | 18.8 | 78.1 | 36.6 | 28.1 | 52.7 | 38.5 | 36.4 | 38.0 | 37.0 | 19.1 |
| Level of Service | E | C | B | E | D | C | D | D | D | D | D | B |
| Approach Delay (s) | | 34.6 | | | 40.0 | | | 44.4 | | | 23.9 | |
| Approach LOS | | C | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 93.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 4 | 0 | 0 | 70 | 0 | 449 | 18 | 0 | 538 | 7 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 0 | 0 | 5 | 0 | 0 | 81 | 0 | 522 | 21 | 0 | 626 | 8 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | 0.97 | | | | | |
| vC, conflicting volume | 1229 | 1169 | 626 | 1152 | 1156 | 522 | 634 | | | 543 | | |
| vC1, stage 1 conf vol | 626 | 626 | | 522 | 522 | | | | | | | |
| vC2, stage 2 conf vol | 603 | 543 | | 630 | 634 | | | | | | | |
| vCu, unblocked vol | 1221 | 1159 | 601 | 1143 | 1146 | 522 | 609 | | | 543 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 99 | 100 | 100 | 85 | 100 | | | 100 | | |
| cM capacity (veh/h) | 332 | 387 | 490 | 382 | 390 | 559 | 952 | | | 1036 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 81 | 522 | 21 | 626 | 8 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 5 | 81 | 0 | 21 | 0 | 8 |
| cSH | 490 | 559 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.15 | 0.31 | 0.01 | 0.37 | 0.00 |
| Queue Length 95th (ft) | 1 | 13 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 12.4 | 12.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | B | | | | |
| Approach Delay (s) | 12.4 | 12.5 | 0.0 | | 0.0 | |
| Approach LOS | B | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 38.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 0 | 5 | 39 | 1 | 101 | 6 | 335 | 18 | 224 | 312 | 5 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 36 | 0 | 6 | 46 | 1 | 120 | 7 | 399 | 21 | 267 | 371 | 6 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1439 | 1339 | 371 | 1324 | 1324 | 399 | 377 | | | 420 | | |
| vC1, stage 1 conf vol | 905 | 905 | | 413 | 413 | | | | | | | |
| vC2, stage 2 conf vol | 534 | 435 | | 911 | 911 | | | | | | | |
| vCu, unblocked vol | 1439 | 1339 | 371 | 1324 | 1324 | 399 | 377 | | | 420 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 76 | 100 | 99 | 80 | 100 | 82 | 99 | | | 77 | | |
| cM capacity (veh/h) | 149 | 228 | 679 | 232 | 250 | 655 | 1192 | | | 1150 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 168 | 7 | 399 | 21 | 267 | 371 | 6 |
| Volume Left | 36 | 46 | 7 | 0 | 0 | 267 | 0 | 0 |
| Volume Right | 6 | 120 | 0 | 0 | 21 | 0 | 0 | 6 |
| cSH | 168 | 432 | 1192 | 1700 | 1700 | 1150 | 1700 | 1700 |
| Volume to Capacity | 0.25 | 0.39 | 0.01 | 0.23 | 0.01 | 0.23 | 0.22 | 0.00 |
| Queue Length 95th (ft) | 23 | 45 | 0 | 0 | 0 | 22 | 0 | 0 |
| Control Delay (s) | 33.5 | 18.5 | 8.0 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 |
| Lane LOS | D | C | A | | | A | | |
| Approach Delay (s) | 33.5 | 18.5 | 0.1 | | | 3.8 | | |
| Approach LOS | D | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.4 | | |
| Intersection Capacity Utilization | 48.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 61 | 5 | 5 | 8 | 5 | 32 | 2 | 268 | 11 | 55 | 247 | 55 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 69 | 6 | 6 | 9 | 6 | 36 | 2 | 301 | 12 | 62 | 278 | 62 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 783 | 750 | 308 | 752 | 775 | 307 | 339 | | | 313 | | |
| vC1, stage 1 conf vol | 432 | 432 | | 312 | 312 | | | | | | | |
| vC2, stage 2 conf vol | 351 | 318 | | 440 | 463 | | | | | | | |
| vCu, unblocked vol | 783 | 750 | 308 | 752 | 775 | 307 | 339 | | | 313 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 85 | 99 | 99 | 98 | 99 | 95 | 100 | | | 95 | | |
| cM capacity (veh/h) | 465 | 479 | 736 | 497 | 481 | 737 | 1231 | | | 1258 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 80 | 51 | 316 | 401 |
| Volume Left | 69 | 9 | 2 | 62 |
| Volume Right | 6 | 36 | 12 | 62 |
| cSH | 479 | 644 | 1231 | 1258 |
| Volume to Capacity | 0.17 | 0.08 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 15 | 6 | 0 | 4 |
| Control Delay (s) | 14.0 | 11.1 | 0.1 | 1.6 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 14.0 | 11.1 | 0.1 | 1.6 |
| Approach LOS | B | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.8 | | |
| Intersection Capacity Utilization | 54.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.412 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.1 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1 | 0 | 0 | 0 0 1! | 0 | 0 | 0 1 | 0 | 0 0 | 0 0 0 | 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1 | 0 | 31 | 0 | 198 | 162 | 8 | 0 | 0 | 9 | 9 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 1 | 0 | 31 | 0 | 198 | 162 | 8 | 0 | 0 | 9 | 9 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 21 | 27 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 1 | 0 | 31 | 0 | 219 | 189 | 8 | 0 | 0 | 9 | 9 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| PHF Volume: | 0 | 1 | 0 | 43 | 0 | 302 | 261 | 11 | 0 | 0 | 12 | 12 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1 | 0 | 43 | 0 | 302 | 261 | 11 | 0 | 0 | 12 | 12 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 1 | 0 | 43 | 0 | 302 | 261 | 11 | 0 | 0 | 12 | 12 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 0.12 | 0.00 | 0.88 | 0.96 | 0.04 | 0.00 | 0.00 | 0.50 | 0.50 |
| Final Sat.: | 0 | 668 | 0 | 104 | 0 | 733 | 681 | 29 | 0 | 0 | 355 | 355 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.00 | xxxx | 0.41 | xxxx | 0.41 | 0.38 | 0.38 | xxxx | xxxx | 0.03 | 0.03 |
| Crit Moves: | | **** | | **** | | | | **** | | | **** | |
| Delay/Veh: | 0.0 | 8.0 | 0.0 | 9.8 | 0.0 | 9.8 | 10.6 | 10.6 | 0.0 | 0.0 | 7.8 | 7.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 8.0 | 0.0 | 9.8 | 0.0 | 9.8 | 10.6 | 10.6 | 0.0 | 0.0 | 7.8 | 7.8 |
| LOS by Move: | * | A | * | A | * | A | B | B | * | * | A | A |
| ApproachDel: | | 8.0 | | | 9.8 | | | 10.6 | | | 7.8 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.0 | | | 9.8 | | | 10.6 | | | 7.8 | |
| LOS by Appr: | | A | | | A | | | B | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 207 | 24 | 34 | 0 | 0 | 163 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 280 | 32 | 46 | 0 | 0 | 220 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 202 | 110 | 220 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 202 | 110 | 220 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 63 | 97 | 97 | | | |
| cM capacity (veh/h) | 762 | 949 | 1361 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 280 | 32 | 46 | 220 |
| Volume Left | 280 | 0 | 46 | 0 |
| Volume Right | 0 | 32 | 0 | 220 |
| cSH | 762 | 949 | 1361 | 1700 |
| Volume to Capacity | 0.37 | 0.03 | 0.03 | 0.13 |
| Queue Length 95th (ft) | 42 | 3 | 3 | 0 |
| Control Delay (s) | 12.4 | 8.9 | 7.7 | 0.0 |
| Lane LOS | B | A | A | |
| Approach Delay (s) | 12.1 | | 7.7 | 0.0 |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.1 | | |
| Intersection Capacity Utilization | 34.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 199 | 815 | 225 | 191 | 1635 | 84 | 299 | 57 | 152 | 168 | 84 | 537 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.98 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 0.89 | | 1.00 | 0.89 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3406 | 1587 | 1805 | 5096 | | 3502 | 3178 | | 1805 | 1580 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3406 | 1587 | 1805 | 5096 | | 3502 | 3178 | | 1805 | 1580 | 1513 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 219 | 896 | 247 | 210 | 1797 | 92 | 329 | 63 | 167 | 185 | 92 | 590 |
| RTOR Reduction (vph) | 0 | 0 | 173 | 0 | 5 | 0 | 0 | 116 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 219 | 896 | 74 | 210 | 1884 | 0 | 329 | 114 | 0 | 185 | 346 | 336 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 993 | 462 | 127 | 1571 | | 1079 | 979 | | 255 | 223 | 296 |
| v/s Ratio Prot | 0.06 | 0.26 | | c0.12 | c0.37 | | c0.09 | 0.04 | | 0.10 | c0.22 | 0.06 |
| v/s Ratio Perm | | | 0.05 | | | | | | | | | 0.16 |
| v/c Ratio | 1.16 | 0.90 | 0.16 | 1.65 | 1.20 | | 0.30 | 0.12 | | 0.73 | 1.55 | 1.14 |
| Uniform Delay, d1 | 56.8 | 40.9 | 31.6 | 55.8 | 41.5 | | 31.7 | 29.8 | | 49.3 | 51.5 | 48.2 |
| Progression Factor | 0.84 | 0.80 | 1.62 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 113.2 | 12.4 | 0.7 | 326.4 | 96.1 | | 0.7 | 0.2 | | 8.4 | 269.1 | 93.9 |
| Delay (s) | 160.6 | 45.0 | 52.0 | 382.2 | 137.6 | | 32.4 | 30.0 | | 57.7 | 320.6 | 142.1 |
| Level of Service | F | D | D | F | F | | C | C | | E | F | F |
| Approach Delay (s) | | 64.9 | | | 162.1 | | | 31.4 | | | 195.4 | |
| Approach LOS | | E | | | F | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 126.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 98.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1088 | 168 | 0 | 1668 | 0 | 105 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 1183 | 183 | 0 | 1813 | 0 | 114 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.81 | | 0.81 | 0.81 |
| vC, conflicting volume | | | 1365 | | 1727 | 683 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 983 | | 1429 | 140 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 84 |
| cM capacity (veh/h) | | | 576 | | 104 | 720 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 788 | 577 | 453 | 453 | 453 | 453 | 114 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 183 | 0 | 0 | 0 | 0 | 114 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 720 |
| Volume to Capacity | 0.46 | 0.34 | 0.27 | 0.27 | 0.27 | 0.27 | 0.16 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 |
| Lane LOS | | | | | | | B |
| Approach Delay (s) | 0.0 | | 0.0 | | | | 10.9 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 48.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 127 | 1010 | 55 | 56 | 1426 | 155 | 105 | 7 | 19 | 145 | 9 | 125 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.89 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3502 | 3295 | | 1805 | 3374 | 1586 | 1805 | 1670 | | | 1806 | 1582 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.51 | 1.00 | | | 0.72 | 1.00 |
| Satd. Flow (perm) | 3502 | 3295 | | 1805 | 3374 | 1586 | 960 | 1670 | | | 1355 | 1582 |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 144 | 1148 | 62 | 64 | 1620 | 176 | 119 | 8 | 22 | 165 | 10 | 142 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 0 | 74 | 0 | 18 | 0 | 0 | 0 | 117 |
| Lane Group Flow (vph) | 144 | 1207 | 0 | 64 | 1620 | 102 | 119 | 12 | 0 | 0 | 175 | 25 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 9% | 0% | 0% | 7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 9.7 | 63.2 | | 7.5 | 61.0 | 61.0 | 18.4 | 18.4 | | | 18.4 | 18.4 |
| Effective Green, g (s) | 9.7 | 63.2 | | 7.5 | 61.0 | 61.0 | 18.4 | 18.4 | | | 18.4 | 18.4 |
| Actuated g/C Ratio | 0.09 | 0.60 | | 0.07 | 0.58 | 0.58 | 0.18 | 0.18 | | | 0.18 | 0.18 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 323 | 1983 | | 128 | 1960 | 921 | 168 | 292 | | | 237 | 277 |
| v/s Ratio Prot | c0.04 | 0.37 | | 0.04 | c0.48 | | | 0.01 | | | | |
| v/s Ratio Perm | | | | | | 0.06 | 0.12 | | | | c0.13 | 0.02 |
| v/c Ratio | 0.45 | 0.61 | | 0.50 | 0.83 | 0.11 | 0.71 | 0.04 | | | 0.74 | 0.09 |
| Uniform Delay, d1 | 45.1 | 13.1 | | 46.9 | 17.7 | 9.9 | 40.8 | 36.0 | | | 41.0 | 36.3 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.0 | 1.4 | | 3.1 | 4.2 | 0.2 | 12.8 | 0.1 | | | 11.4 | 0.1 |
| Delay (s) | 46.1 | 14.5 | | 50.0 | 21.9 | 10.1 | 53.6 | 36.0 | | | 52.4 | 36.4 |
| Level of Service | D | B | | D | C | B | D | D | | | D | D |
| Approach Delay (s) | | 17.9 | | | 21.7 | | | 50.0 | | | 45.2 | |
| Approach LOS | | B | | | C | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 72.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 131 | 59 | 61 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 142 | 64 | 66 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 240 | 97 | 130 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 240 | 97 | 130 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 753 | 964 | 1467 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 0 | 142 | 130 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 66 |
| cSH | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.08 | 0.08 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 10.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 123 | 3 | 3 | 8 | 8 | 51 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 134 | 3 | 3 | 9 | 9 | 55 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | None | |
| Median storage veh) | | | | 2 | | |
| Upstream signal (ft) | | | | | 753 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 52 | 36 | 64 | | | |
| vC1, stage 1 conf vol | 36 | | | | | |
| vC2, stage 2 conf vol | 15 | | | | | |
| vCu, unblocked vol | 52 | 36 | 64 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | 5.4 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 86 | 100 | 100 | | | |
| cM capacity (veh/h) | 962 | 1042 | 1551 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 137 | 12 | 64 |
| Volume Left | 134 | 3 | 0 |
| Volume Right | 3 | 0 | 55 |
| cSH | 964 | 1551 | 1700 |
| Volume to Capacity | 0.14 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 12 | 0 | 0 |
| Control Delay (s) | 9.4 | 2.0 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.4 | 2.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.1 | | |
| Intersection Capacity Utilization | 17.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 2 | 0 | 0 | 10 | 8 | 0 | 0 | 2 | 6 | 2 | 2 |
| Peak Hour Factor | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| Hourly flow rate (vph) | 0 | 3 | 0 | 0 | 15 | 12 | 0 | 0 | 3 | 9 | 3 | 3 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 3 | 27 | 3 | 15 |
| Volume Left (vph) | 0 | 0 | 0 | 9 |
| Volume Right (vph) | 0 | 12 | 3 | 3 |
| Hadj (s) | 0.00 | -0.27 | -0.60 | 0.00 |
| Departure Headway (s) | 4.0 | 3.7 | 3.4 | 4.0 |
| Degree Utilization, x | 0.00 | 0.03 | 0.00 | 0.02 |
| Capacity (veh/h) | 897 | 970 | 1053 | 897 |
| Control Delay (s) | 7.0 | 6.8 | 6.4 | 7.0 |
| Approach Delay (s) | 7.0 | 6.8 | 6.4 | 7.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.8 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 15.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 12 Average Delay (sec/veh): 24.5
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 59 | 15 | 6 | 60 | 4 | 28 | 11 | 1080 | 27 | 5 | 1447 | 95 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 59 | 15 | 6 | 60 | 4 | 28 | 11 | 1080 | 27 | 5 | 1447 | 95 |
| Added Vol: | 6 | 0 | 0 | 0 | 0 | 10 | 8 | 41 | 4 | 0 | 53 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 65 | 15 | 6 | 60 | 4 | 38 | 19 | 1121 | 31 | 5 | 1500 | 95 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| PHF Volume: | 78 | 18 | 7 | 72 | 5 | 46 | 23 | 1347 | 37 | 6 | 1803 | 114 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 78 | 18 | 7 | 72 | 5 | 46 | 23 | 1347 | 37 | 6 | 1803 | 114 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 78 | 18 | 7 | 72 | 5 | 46 | 23 | 1347 | 37 | 6 | 1803 | 114 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.70 | 0.70 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.76 | 0.17 | 0.07 | 0.94 | 0.06 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1050 | 242 | 97 | 1242 | 83 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.06 | 0.06 | 0.03 | 0.01 | 0.37 | 0.02 | 0.00 | 0.50 | 0.07 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.08 | 0.54 | 0.54 | 0.12 | 0.58 | 0.58 |
| Volume/Cap: | 0.31 | 0.31 | 0.31 | 0.24 | 0.24 | 0.12 | 0.15 | 0.69 | 0.04 | 0.03 | 0.87 | 0.12 |
| Delay/Veh: | 37.8 | 37.8 | 37.8 | 37.0 | 37.0 | 35.6 | 51.5 | 21.5 | 13.1 | 46.7 | 25.9 | 11.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.8 | 37.8 | 37.8 | 37.0 | 37.0 | 35.6 | 51.5 | 21.5 | 13.1 | 46.7 | 25.9 | 11.7 |
| LOS by Move: | D | D | D | D | D | D | D | C | B | D | C | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 20 | 1 | 0 | 32 | 2 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 95 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 12 Average Delay (sec/veh): 21.9
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 32 | 32 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 3 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 205 | 0 | 28 | 0 | 0 | 0 | 0 | 1009 | 123 | 20 | 1289 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 205 | 0 | 28 | 0 | 0 | 0 | 0 | 1009 | 123 | 20 | 1289 | 0 |
| Added Vol: | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 10 | 0 | 41 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 217 | 0 | 28 | 0 | 0 | 0 | 0 | 1040 | 133 | 20 | 1330 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| PHF Volume: | 258 | 0 | 33 | 0 | 0 | 0 | 0 | 1235 | 158 | 24 | 1580 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 258 | 0 | 33 | 0 | 0 | 0 | 0 | 1235 | 158 | 24 | 1580 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 258 | 0 | 33 | 0 | 0 | 0 | 0 | 1235 | 158 | 24 | 1580 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1805 | 0 | 1615 | 0 | 0 | 0 | 0 | 5187 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.10 | 0.01 | 0.44 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 | 0.42 | 0.11 | 0.53 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.57 | 0.23 | 0.12 | 0.83 | 0.00 |
| Delay/Veh: | 24.0 | 0.0 | 20.7 | 0.0 | 0.0 | 0.0 | 0.0 | 21.2 | 17.8 | 38.8 | 22.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.0 | 0.0 | 20.7 | 0.0 | 0.0 | 0.0 | 0.0 | 21.2 | 17.8 | 38.8 | 22.2 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | C | B | D | C | A |
| HCM2kAvgQ: | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 3 | 1 | 23 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.390
Loss Time (sec): 12 Average Delay (sec/veh): 14.1
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 2 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 169 | 0 | 13 | 0 | 0 | 0 | 0 | 891 | 119 | 11 | 1098 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 169 | 0 | 13 | 0 | 0 | 0 | 0 | 891 | 119 | 11 | 1098 | 0 |
| Added Vol: | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 7 | 0 | 28 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 178 | 0 | 13 | 0 | 0 | 0 | 0 | 913 | 126 | 11 | 1126 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 202 | 0 | 15 | 0 | 0 | 0 | 0 | 1034 | 143 | 12 | 1275 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 202 | 0 | 15 | 0 | 0 | 0 | 0 | 1034 | 143 | 12 | 1275 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 202 | 0 | 15 | 0 | 0 | 0 | 0 | 1034 | 143 | 12 | 1275 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.92 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 2.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 3502 | 0 | 1615 | 0 | 0 | 0 | 0 | 3610 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.09 | 0.01 | 0.35 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.23 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.59 | 0.59 | 0.08 | 0.68 | 0.00 |
| Volume/Cap: | 0.26 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.15 | 0.08 | 0.52 | 0.00 |
| Delay/Veh: | 38.4 | 0.0 | 36.4 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 | 11.0 | 51.0 | 10.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 38.4 | 0.0 | 36.4 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 | 11.0 | 51.0 | 10.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | A | B | B | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 2 | 0 | 12 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 80 | Critical Vol./Cap.(X): | 0.610 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 22.6 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 56 | 11 | 21 | 295 | 18 | 72 | 25 | 740 | 32 | 13 | 841 | 91 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 56 | 11 | 21 | 295 | 18 | 72 | 25 | 740 | 32 | 13 | 841 | 91 |
| Added Vol: | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 7 | 0 | 12 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 65 | 11 | 21 | 295 | 18 | 72 | 25 | 750 | 39 | 13 | 853 | 91 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 73 | 12 | 24 | 333 | 20 | 81 | 28 | 847 | 44 | 15 | 964 | 103 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 73 | 12 | 24 | 333 | 20 | 81 | 28 | 847 | 44 | 15 | 964 | 103 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 73 | 12 | 24 | 333 | 20 | 81 | 28 | 847 | 44 | 15 | 964 | 103 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.69 | 0.90 | 0.90 | 0.74 | 0.88 | 0.88 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.34 | 0.66 | 1.00 | 0.20 | 0.80 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1307 | 589 | 1125 | 1404 | 334 | 1338 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.02 | 0.02 | 0.24 | 0.06 | 0.06 | 0.02 | 0.23 | 0.03 | 0.01 | 0.27 | 0.06 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.12 | 0.36 | 0.36 | 0.15 | 0.39 | 0.39 |
| Volume/Cap: | 0.16 | 0.06 | 0.06 | 0.69 | 0.18 | 0.18 | 0.13 | 0.65 | 0.08 | 0.06 | 0.69 | 0.17 |
| Delay/Veh: | 18.7 | 17.9 | 17.9 | 27.2 | 18.8 | 18.8 | 31.9 | 22.6 | 16.9 | 29.9 | 22.4 | 16.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 18.7 | 17.9 | 17.9 | 27.2 | 18.8 | 18.8 | 31.9 | 22.6 | 16.9 | 29.9 | 22.4 | 16.5 |
| LOS by Move: | B | B | B | C | B | B | C | C | B | C | C | B |
| HCM2kAvgQ: | 1 | 1 | 1 | 8 | 2 | 2 | 1 | 10 | 1 | 0 | 12 | 2 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 0.906 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 66.1 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Added Vol: | 3 | 0 | 14 | 14 | 0 | 3 | 3 | 90 | 3 | 13 | 135 | 13 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 231 | 349 | 37 | 238 | 271 | 211 | 171 | 876 | 267 | 70 | 722 | 350 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3218 | 341 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.12 | 0.12 | 0.14 | 0.08 | 0.14 | 0.10 | 0.26 | 0.18 | 0.04 | 0.41 | 0.23 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.28 | 0.28 | 0.13 | 0.28 | 0.28 | 0.09 | 0.35 | 0.35 | 0.11 | 0.37 | 0.37 |
| Volume/Cap: | 1.09 | 0.42 | 0.42 | 1.12 | 0.29 | 0.51 | 1.09 | 0.74 | 0.50 | 0.37 | 1.09 | 0.62 |
| Delay/Veh: | 138.5 | 36.0 | 36.0 | 149.5 | 34.5 | 37.6 | 150.2 | 36.2 | 31.2 | 50.4 | 98.8 | 32.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 138.5 | 36.0 | 36.0 | 149.5 | 34.5 | 37.6 | 150.2 | 36.2 | 31.2 | 50.4 | 98.8 | 32.7 |
| LOS by Move: | F | D | D | F | C | D | F | D | C | D | F | C |
| HCM2kAvgQ: | 15 | 7 | 7 | 16 | 4 | 7 | 12 | 17 | 8 | 3 | 40 | 12 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.622 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 14.1 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Lanes: | 0 | 0 | 1! | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1! | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 11 | 11 | 15 | | 159 | 11 | 123 | | 178 | 163 | 7 | | 16 | 178 | 100 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 11 | 11 | 15 | | 159 | 11 | 123 | | 178 | 163 | 7 | | 16 | 178 | 100 | |
| Added Vol: | 0 | 0 | 0 | | 8 | 0 | 0 | | 0 | 17 | 0 | | 0 | 17 | 8 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 11 | 11 | 15 | | 167 | 11 | 123 | | 178 | 180 | 7 | | 16 | 195 | 108 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | |
| PHF Volume: | 12 | 12 | 16 | | 181 | 12 | 133 | | 193 | 195 | 8 | | 17 | 211 | 117 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 12 | 12 | 16 | | 181 | 12 | 133 | | 193 | 195 | 8 | | 17 | 211 | 117 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 12 | 12 | 16 | | 181 | 12 | 133 | | 193 | 195 | 8 | | 17 | 211 | 117 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Lanes: | 0.30 | 0.30 | 0.40 | | 1.00 | 0.08 | 0.92 | | 0.49 | 0.49 | 0.02 | | 0.05 | 0.61 | 0.34 | |
| Final Sat.: | 143 | 143 | 195 | | 495 | 48 | 538 | | 310 | 313 | 12 | | 33 | 397 | 220 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.08 | 0.08 | | 0.37 | 0.25 | 0.25 | | 0.62 | 0.62 | 0.62 | | 0.53 | 0.53 | 0.53 | |
| Crit Moves: | | | **** | | **** | | | | | **** | | | | | **** | |
| Delay/Veh: | 9.8 | 9.8 | 9.8 | | 13.3 | 10.2 | 10.2 | | 16.6 | 16.6 | 16.6 | | 13.8 | 13.8 | 13.8 | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 9.8 | 9.8 | 9.8 | | 13.3 | 10.2 | 10.2 | | 16.6 | 16.6 | 16.6 | | 13.8 | 13.8 | 13.8 | |
| LOS by Move: | A | A | A | | B | B | B | | C | C | C | | B | B | B | |
| ApproachDel: | 9.8 | | | | 11.9 | | | | 16.6 | | | | 13.8 | | | |
| Delay Adj: | 1.00 | | | | 1.00 | | | | 1.00 | | | | 1.00 | | | |
| ApprAdjDel: | 9.8 | | | | 11.9 | | | | 16.6 | | | | 13.8 | | | |
| LOS by Appr: | A | | | | B | | | | C | | | | B | | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.1 | | 0.5 | 0.3 | 0.3 | | 1.4 | 1.4 | 1.4 | | 1.0 | 1.0 | 1.0 | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 74 | 144 | 15 | 451 | 183 | 257 | 26 | 404 | 339 | 235 | 389 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.91 | | 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) | 1805 | 5106 | | 3367 | 3262 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5106 | | 3367 | 3262 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 75 | 145 | 15 | 456 | 185 | 260 | 26 | 408 | 342 | 237 | 393 | 52 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| Lane Group Flow (vph) | 75 | 151 | 0 | 456 | 298 | 0 | 26 | 408 | 342 | 237 | 393 | 13 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 49.6 | | 5.5 | 49.8 | | 9.5 | 33.9 | 33.9 | 5.0 | 29.4 | 29.4 |
| Effective Green, g (s) | 5.3 | 49.6 | | 5.5 | 49.8 | | 9.5 | 33.9 | 33.9 | 5.0 | 29.4 | 29.4 |
| Actuated g/C Ratio | 0.05 | 0.43 | | 0.05 | 0.43 | | 0.08 | 0.29 | 0.29 | 0.04 | 0.26 | 0.26 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 2202 | | 161 | 1412 | | 149 | 1064 | 441 | 78 | 922 | 406 |
| v/s Ratio Prot | 0.04 | 0.03 | | c0.14 | c0.09 | | 0.01 | 0.11 | | c0.13 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | c0.23 | | | 0.01 |
| v/c Ratio | 0.90 | 0.07 | | 2.83 | 0.21 | | 0.17 | 0.38 | 0.78 | 3.04 | 0.43 | 0.03 |
| Uniform Delay, d1 | 54.6 | 19.2 | | 54.8 | 20.3 | | 49.1 | 32.2 | 37.1 | 55.0 | 35.8 | 32.1 |
| Progression Factor | 1.00 | 1.00 | | 0.89 | 0.42 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 66.1 | 0.1 | | 840.2 | 0.3 | | 0.2 | 0.1 | 7.6 | 950.5 | 0.1 | 0.0 |
| Delay (s) | 120.7 | 19.2 | | 889.1 | 8.9 | | 49.3 | 32.3 | 44.7 | 1005.5 | 35.9 | 32.1 |
| Level of Service | F | B | | F | A | | D | C | D | F | D | C |
| Approach Delay (s) | | 51.6 | | | 454.4 | | | 38.3 | | | 372.5 | |
| Approach LOS | | D | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 271.9 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 91.7% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): 26.2 Worst Case Level Of Service: F[1189.0]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 10 | 33 | 2 | 7 | 6 | 1028 | 6 | 7 | 968 | 104 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 2 | 2 | 10 | 33 | 2 | 7 | 6 | 1028 | 6 | 7 | 968 | 104 | | | | | | | | | | | | |
| Added Vol: | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 122 | 0 | 13 | 166 | 13 | | | | | | | | | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Initial Fut: | 2 | 2 | 22 | 45 | 2 | 7 | 6 | 1150 | 6 | 20 | 1134 | 117 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | | | | | |
| PHF Volume: | 2 | 2 | 23 | 47 | 2 | 7 | 6 | 1193 | 6 | 21 | 1176 | 121 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| FinalVolume: | 2 | 2 | 23 | 47 | 2 | 7 | 6 | 1193 | 6 | 21 | 1176 | 121 | | | | | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 2492 | 2548 | 1196 | 2499 | 2490 | 1237 | 1298 | xxxx | xxxxx | 1199 | xxxx | xxxxx | | | | | | | | | | | | |
| Potent Cap.: | 20 | 27 | 229 | 20 | 30 | 217 | 541 | xxxx | xxxxx | 589 | xxxx | xxxxx | | | | | | | | | | | | |
| Move Cap.: | 18 | 26 | 229 | 16 | 28 | 217 | 541 | xxxx | xxxxx | 589 | xxxx | xxxxx | | | | | | | | | | | | |
| Volume/Cap: | 0.12 | 0.08 | 0.10 | 2.89 | 0.07 | 0.03 | 0.01 | xxxx | xxxx | 0.04 | xxxx | xxxx | | | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 0.3 | xxxx | xxxx | 0.1 | 0.0 | xxxx | xxxxx | 0.1 | xxxx | xxxxx | | | | | | | | | | | | |
| Control Del: | xxxxx | xxxx | 22.5 | xxxxx | xxxx | 22.2 | 11.7 | xxxx | xxxxx | 11.3 | xxxx | xxxxx | | | | | | | | | | | | |
| LOS by Move: | * | * | C | * | * | C | B | * | * | B | * | * | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 21 | xxxx | xxxxx | 16 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | | | | | |
| SharedQueue: | 0.6 | xxxx | xxxxx | 6.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | 214.4 | xxxx | xxxxx | 1363 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | F | * | * | F | * | * | * | * | * | * | * | * | | | | | | | | | | | | |
| ApproachDel: | 52.0 | | | 1189.0 | | | xxxxxx | | | xxxxxx | | | | | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 110 Critical Vol./Cap.(X): 0.947
Loss Time (sec): 12 Average Delay (sec/veh): 33.8
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T | - R | | L - T | - R | | L - T | - R | | L - T | - R | |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 884 | 237 | 9 | 4 | 179 | 117 | 104 | 17 | 899 | 38 | 24 | 13 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 884 | 237 | 9 | 4 | 179 | 117 | 104 | 17 | 899 | 38 | 24 | 13 |
| Added Vol: | 180 | 13 | 0 | 0 | 12 | 11 | 7 | 0 | 140 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1064 | 250 | 9 | 4 | 191 | 128 | 111 | 17 | 1039 | 38 | 24 | 13 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 1138 | 267 | 10 | 4 | 204 | 137 | 119 | 18 | 1111 | 41 | 26 | 14 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1138 | 267 | 10 | 4 | 204 | 137 | 119 | 18 | 1111 | 41 | 26 | 14 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1138 | 267 | 10 | 4 | 204 | 137 | 119 | 18 | 1111 | 41 | 26 | 14 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.85 | 0.68 | 0.68 | 0.85 | 0.55 | 0.55 | 0.55 |
| Lanes: | 1.00 | 0.97 | 0.03 | 1.00 | 1.00 | 1.00 | 0.87 | 0.13 | 1.00 | 0.51 | 0.32 | 0.17 |
| Final Sat.: | 1805 | 1825 | 66 | 1805 | 1900 | 1615 | 1119 | 171 | 1615 | 529 | 334 | 181 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.63 | 0.15 | 0.15 | 0.00 | 0.11 | 0.08 | 0.11 | 0.11 | 0.69 | 0.08 | 0.08 | 0.08 |
| Crit Moves: | **** | | | | **** | | | **** | | | | |
| Green/Cycle: | 0.67 | 0.67 | 0.67 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.78 | 0.11 | 0.11 | 0.11 |
| Volume/Cap: | 0.95 | 0.22 | 0.22 | 0.02 | 0.95 | 0.75 | 0.95 | 0.95 | 0.89 | 0.69 | 0.69 | 0.69 |
| Delay/Veh: | 31.8 | 7.3 | 7.3 | 43.4 | 94.9 | 62.7 | 107.4 | 107 | 16.6 | 62.7 | 62.7 | 62.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 31.8 | 7.3 | 7.3 | 43.4 | 94.9 | 62.7 | 107.4 | 107 | 16.6 | 62.7 | 62.7 | 62.7 |
| LOS by Move: | C | A | A | D | F | E | F | F | B | E | E | E |
| HCM2kAvgQ: | 40 | 4 | 4 | 0 | 11 | 6 | 8 | 8 | 30 | 4 | 4 | 4 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 195 | 340 | 52 | 246 | 220 | 920 | 61 | 163 | 439 | 1094 | 146 | 26 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3439 | | 3367 | 1827 | 2814 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3439 | | 3367 | 1827 | 2814 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 210 | 366 | 56 | 265 | 237 | 989 | 66 | 175 | 472 | 1176 | 157 | 28 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 0 | 75 | 0 | 0 | 76 | 0 | 0 | 15 |
| Lane Group Flow (vph) | 210 | 410 | 0 | 265 | 237 | 914 | 66 | 175 | 396 | 1176 | 157 | 13 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 4% | 4% | 0% | 0% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 9.9 | 19.5 | | 18.6 | 27.5 | 75.6 | 7.8 | 14.7 | 33.3 | 48.1 | 55.0 | 55.0 |
| Effective Green, g (s) | 9.9 | 19.5 | | 18.6 | 27.5 | 75.6 | 7.8 | 14.7 | 33.3 | 48.1 | 55.0 | 55.0 |
| Actuated g/C Ratio | 0.08 | 0.16 | | 0.16 | 0.23 | 0.63 | 0.06 | 0.12 | 0.28 | 0.40 | 0.46 | 0.46 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 288 | 558 | | 521 | 418 | 1772 | 117 | 232 | 435 | 1403 | 1654 | 726 |
| v/s Ratio Prot | 0.06 | c0.12 | | 0.08 | 0.13 | 0.21 | 0.04 | 0.09 | c0.14 | c0.34 | 0.04 | |
| v/s Ratio Perm | | | | | | 0.12 | | | 0.11 | | | 0.01 |
| v/c Ratio | 0.73 | 0.74 | | 0.51 | 0.57 | 0.52 | 0.56 | 0.75 | 0.91 | 0.84 | 0.09 | 0.02 |
| Uniform Delay, d1 | 53.7 | 47.8 | | 46.5 | 41.0 | 12.2 | 54.5 | 50.9 | 41.9 | 32.4 | 18.4 | 17.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 7.6 | 4.3 | | 0.3 | 1.1 | 0.1 | 3.7 | 20.1 | 22.6 | 4.4 | 0.1 | 0.0 |
| Delay (s) | 61.3 | 52.1 | | 46.8 | 42.0 | 12.3 | 58.1 | 71.1 | 64.5 | 36.8 | 18.5 | 17.8 |
| Level of Service | E | D | | D | D | B | E | E | E | D | B | B |
| Approach Delay (s) | | 55.2 | | | 23.1 | | | 65.5 | | | 34.3 | |
| Approach LOS | | E | | | C | | | E | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 38.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 81.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 72 | 599 | 48 | 258 | 738 | 149 | 58 | 129 | 158 | 153 | 179 | 96 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.97 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4940 | | 3502 | 3423 | | 1800 | 3282 | | 1800 | 3401 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.51 | 1.00 | | 0.49 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4940 | | 3502 | 3423 | | 968 | 3282 | | 937 | 3401 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 77 | 637 | 51 | 274 | 785 | 159 | 62 | 137 | 168 | 163 | 190 | 102 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 11 | 0 | 0 | 134 | 0 | 0 | 78 | 0 |
| Lane Group Flow (vph) | 77 | 682 | 0 | 274 | 933 | 0 | 62 | 171 | 0 | 163 | 214 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 8.4 | 63.6 | | 11.4 | 66.6 | | 23.5 | 23.5 | | 23.5 | 23.5 | |
| Effective Green, g (s) | 8.4 | 63.6 | | 11.4 | 66.6 | | 23.5 | 23.5 | | 23.5 | 23.5 | |
| Actuated g/C Ratio | 0.07 | 0.55 | | 0.10 | 0.58 | | 0.20 | 0.20 | | 0.20 | 0.20 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 131 | 2732 | | 347 | 1982 | | 197 | 670 | | 191 | 694 | |
| v/s Ratio Prot | c0.04 | 0.14 | | c0.08 | c0.27 | | | 0.05 | | | 0.06 | |
| v/s Ratio Perm | | | | | | | 0.06 | | | c0.17 | | |
| v/c Ratio | 0.59 | 0.25 | | 0.79 | 0.47 | | 0.31 | 0.26 | | 0.85 | 0.31 | |
| Uniform Delay, d1 | 51.6 | 13.3 | | 50.6 | 14.0 | | 38.9 | 38.4 | | 44.1 | 38.8 | |
| Progression Factor | 0.92 | 0.49 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.4 | 0.0 | | 10.5 | 0.8 | | 0.3 | 0.1 | | 28.1 | 0.1 | |
| Delay (s) | 47.7 | 6.5 | | 61.1 | 14.8 | | 39.2 | 38.5 | | 72.2 | 38.9 | |
| Level of Service | D | A | | E | B | | D | D | | E | D | |
| Approach Delay (s) | | 10.6 | | | 25.2 | | | 38.6 | | | 50.8 | |
| Approach LOS | | B | | | C | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 27.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 70.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 279 | 281 | 37 | 354 | 0 | 0 | 0 | 0 | 47 | 0 | 201 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 310 | 312 | 41 | 393 | 0 | 0 | 0 | 0 | 52 | 0 | 223 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 310 | 312 | 41 | 393 | 276 |
| Volume Left (vph) | 0 | 0 | 41 | 0 | 52 |
| Volume Right (vph) | 0 | 312 | 0 | 0 | 223 |
| Hadj (s) | 0.05 | -0.57 | 0.64 | 0.02 | -0.37 |
| Departure Headway (s) | 5.5 | 3.2 | 6.4 | 5.7 | 5.5 |
| Degree Utilization, x | 0.48 | 0.28 | 0.07 | 0.63 | 0.42 |
| Capacity (veh/h) | 622 | 1112 | 547 | 602 | 604 |
| Control Delay (s) | 13.4 | 7.4 | 8.7 | 16.7 | 12.3 |
| Approach Delay (s) | 10.4 | | 15.9 | | 12.3 |
| Approach LOS | B | | C | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 12.6 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 45.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1320 | 554 | 743 | 1400 | 0 | 0 | 0 | 0 | 687 | 0 | 199 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.95 | 1.00 |
| Satd. Flow (prot) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1603 | 1504 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.95 | 1.00 |
| Satd. Flow (perm) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1603 | 1504 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 1389 | 583 | 782 | 1474 | 0 | 0 | 0 | 0 | 723 | 0 | 209 |
| RTOR Reduction (vph) | 0 | 0 | 287 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 1389 | 296 | 782 | 1474 | 0 | 0 | 0 | 0 | 376 | 312 | 132 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 2% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.40 | 0.40 | 0.23 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1439 | 650 | 800 | 2414 | | | | | 377 | 359 | 337 |
| v/s Ratio Prot | | c0.39 | | c0.23 | 0.41 | | | | | c0.22 | 0.19 | 0.09 |
| v/s Ratio Perm | | | 0.18 | | | | | | | | | |
| v/c Ratio | | 0.97 | 0.45 | 0.98 | 0.61 | | | | | 1.00 | 0.87 | 0.39 |
| Uniform Delay, d1 | | 32.1 | 24.0 | 42.0 | 9.9 | | | | | 42.6 | 41.1 | 36.3 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 16.8 | 2.3 | 26.0 | 1.2 | | | | | 45.3 | 18.9 | 0.3 |
| Delay (s) | | 48.9 | 26.3 | 68.0 | 11.0 | | | | | 87.9 | 60.0 | 36.5 |
| Level of Service | | D | C | E | B | | | | | F | E | D |
| Approach Delay (s) | | 42.2 | | | 30.8 | | | 0.0 | | | 66.5 | |
| Approach LOS | | D | | | C | | | A | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 41.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 91.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 314 | 263 | 72 | 439 | 0 | 0 | 0 | 0 | 13 | 0 | 225 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 349 | 292 | 80 | 488 | 0 | 0 | 0 | 0 | 14 | 0 | 250 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 488 | | | 641 | | | 1122 | 997 | 349 | 997 | 1289 | 488 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 488 | | | 641 | | | 1122 | 997 | 349 | 997 | 1289 | 488 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 93 | 100 | 57 |
| cM capacity (veh/h) | 1086 | | | 943 | | | 98 | 225 | 699 | 198 | 151 | 576 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 349 | 292 | 80 | 488 | 264 |
| Volume Left | 0 | 0 | 80 | 0 | 14 |
| Volume Right | 0 | 292 | 0 | 0 | 250 |
| cSH | 1700 | 1700 | 943 | 1700 | 609 |
| Volume to Capacity | 0.21 | 0.17 | 0.08 | 0.29 | 0.43 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 55 |
| Control Delay (s) | 0.0 | 0.0 | 9.2 | 0.0 | 16.4 |
| Lane LOS | | | A | | C |
| Approach Delay (s) | 0.0 | | 1.3 | | 16.4 |
| Approach LOS | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 727 | 184 | 428 | 745 | 0 | 0 | 0 | 0 | 1036 | 6 | 400 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3505 | 1599 | 1770 | 3574 | | | | | 3467 | 1486 | 1475 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3505 | 1599 | 1770 | 3574 | | | | | 3467 | 1486 | 1475 |
| 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) | 0 | 790 | 200 | 465 | 810 | 0 | 0 | 0 | 0 | 1126 | 7 | 435 |
| RTOR Reduction (vph) | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 169 | 176 |
| Lane Group Flow (vph) | 0 | 790 | 58 | 465 | 810 | 0 | 0 | 0 | 0 | 1126 | 51 | 46 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 1% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 2% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.38 | 0.71 | | | | | 0.21 | 0.21 | 0.21 |
| Clearance Time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1013 | 462 | 669 | 2522 | | | | | 713 | 305 | 303 |
| v/s Ratio Prot | | c0.23 | | c0.26 | 0.23 | | | | | c0.32 | 0.03 | |
| v/s Ratio Perm | | | 0.04 | | | | | | | | | 0.03 |
| v/c Ratio | | 0.78 | 0.13 | 0.70 | 0.32 | | | | | 1.58 | 0.17 | 0.15 |
| Uniform Delay, d1 | | 39.1 | 31.5 | 31.5 | 6.7 | | | | | 47.6 | 39.2 | 39.1 |
| Progression Factor | | 1.00 | 1.00 | 0.67 | 0.71 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 5.9 | 0.6 | 2.1 | 0.2 | | | | | 267.4 | 0.1 | 0.1 |
| Delay (s) | | 45.1 | 32.0 | 23.3 | 5.0 | | | | | 315.0 | 39.3 | 39.1 |
| Level of Service | | D | C | C | A | | | | | F | D | D |
| Approach Delay (s) | | 42.4 | | | 11.7 | | | 0.0 | | | 237.3 | |
| Approach LOS | | D | | | B | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 111.9 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 86.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 186 | 140 | 0 | 0 | 123 | 26 | 267 | 0 | 32 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 221 | 167 | 0 | 0 | 146 | 31 | 318 | 0 | 38 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 177 | | | 167 | | | 771 | 787 | 167 | 810 | 771 | 162 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 177 | | | 167 | | | 771 | 787 | 167 | 810 | 771 | 162 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 84 | | | 100 | | | 0 | 100 | 96 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1387 | | | 1424 | | | 278 | 274 | 883 | 253 | 280 | 888 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 221 | 167 | 177 | 356 |
| Volume Left | 221 | 0 | 0 | 318 |
| Volume Right | 0 | 0 | 31 | 38 |
| cSH | 1387 | 1700 | 1700 | 300 |
| Volume to Capacity | 0.16 | 0.10 | 0.10 | 1.19 |
| Queue Length 95th (ft) | 14 | 0 | 0 | 389 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 149.3 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 4.6 | | 0.0 | 149.3 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 59.6 | | |
| Intersection Capacity Utilization | 45.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 159 | 1848 | 0 | 0 | 1517 | 479 | 625 | 0 | 779 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.89 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (prot) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1498 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (perm) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1498 | 1504 | | | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 164 | 1905 | 0 | 0 | 1564 | 494 | 644 | 0 | 803 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 291 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 164 | 1905 | 0 | 0 | 1564 | 203 | 502 | 415 | 402 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 4% | 2% | 0% | 0% | 1% | 5% | 1% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 12.8 | 54.3 | | | 36.9 | 36.9 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 12.8 | 54.3 | | | 36.9 | 36.9 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.14 | 0.60 | | | 0.41 | 0.41 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 246 | 3067 | | | 2105 | 618 | 466 | 411 | 412 | | | |
| v/s Ratio Prot | 0.09 | c0.37 | | | c0.30 | | c0.30 | 0.28 | 0.27 | | | |
| v/s Ratio Perm | | | | | | 0.13 | | | | | | |
| v/c Ratio | 0.67 | 0.62 | | | 0.74 | 0.33 | 1.08 | 1.01 | 0.98 | | | |
| Uniform Delay, d1 | 36.6 | 11.3 | | | 22.5 | 18.1 | 32.6 | 32.6 | 32.4 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 5.2 | 1.0 | | | 2.4 | 1.4 | 64.0 | 46.9 | 37.6 | | | |
| Delay (s) | 41.8 | 12.3 | | | 24.9 | 19.5 | 96.7 | 79.6 | 69.9 | | | |
| Level of Service | D | B | | | C | B | F | E | E | | | |
| Approach Delay (s) | | 14.6 | | | 23.6 | | | 82.4 | | | 0.0 | |
| Approach LOS | | B | | | C | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 35.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 91.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 133 | 194 | 0 | 0 | 220 | 32 | 292 | 0 | 130 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 151 | 220 | 0 | 0 | 250 | 36 | 332 | 0 | 148 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 286 | | | 220 | | | 791 | 809 | 220 | 939 | 791 | 268 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 286 | | | 220 | | | 791 | 809 | 220 | 939 | 791 | 268 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 0 | 100 | 82 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1259 | | | 1361 | | | 278 | 279 | 824 | 184 | 285 | 775 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 151 | 220 | 286 | 480 |
| Volume Left | 151 | 0 | 0 | 332 |
| Volume Right | 0 | 0 | 36 | 148 |
| cSH | 1259 | 1700 | 1700 | 349 |
| Volume to Capacity | 0.12 | 0.13 | 0.17 | 1.37 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 596 |
| Control Delay (s) | 8.3 | 0.0 | 0.0 | 214.9 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 3.4 | | 0.0 | 214.9 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 91.7 | | |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 328 | 1435 | 0 | 0 | 892 | 814 | 281 | 3 | 656 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | | 1.00 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.96 | 0.85 | | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 5136 | | | 3297 | 1455 | | 1758 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 5136 | | | 3297 | 1455 | | 1758 | 2814 | | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 345 | 1511 | 0 | 0 | 939 | 857 | 296 | 3 | 691 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 25 | 230 | 0 | 0 | 109 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 345 | 1511 | 0 | 0 | 1223 | 318 | 0 | 299 | 582 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 1% | 0% | 0% | 1% | 1% | 3% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | | 19.7 | 19.7 | | | |
| Effective Green, g (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | | 19.7 | 19.7 | | | |
| Actuated g/C Ratio | 0.13 | 0.75 | | | 0.58 | 0.58 | | 0.16 | 0.16 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 423 | 3839 | | | 1915 | 845 | | 288 | 461 | | | |
| v/s Ratio Prot | c0.10 | 0.29 | | | c0.37 | | | 0.17 | | | | |
| v/s Ratio Perm | | | | | | 0.22 | | | c0.21 | | | |
| v/c Ratio | 0.82 | 0.39 | | | 0.64 | 0.38 | | 1.04 | 1.26 | | | |
| Uniform Delay, d1 | 50.9 | 5.4 | | | 16.8 | 13.5 | | 50.1 | 50.1 | | | |
| Progression Factor | 1.87 | 1.20 | | | 0.89 | 4.92 | | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 10.2 | 0.0 | | | 1.1 | 0.8 | | 63.3 | 134.9 | | | |
| Delay (s) | 105.3 | 6.5 | | | 16.0 | 67.3 | | 113.5 | 185.0 | | | |
| Level of Service | F | A | | | B | E | | F | F | | | |
| Approach Delay (s) | | 24.9 | | | 31.7 | | | 163.4 | | | 0.0 | |
| Approach LOS | | C | | | C | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 57.1 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 86.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[ 10.3]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 113 | 26 | | | 3 | 57 | 0 | | | 0 | 0 | 0 | | | 28 | 0 | 4 | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| Initial Bse: | 0 | 113 | 26 | | | 3 | 57 | 0 | | | 0 | 0 | 0 | | | 28 | 0 | 4 | | |
| Added Vol: | 0 | 9 | 13 | | | 0 | 10 | 0 | | | 0 | 0 | 0 | | | 14 | 0 | 0 | | |
| PasserByVol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| Initial Fut: | 0 | 122 | 39 | | | 3 | 67 | 0 | | | 0 | 0 | 0 | | | 42 | 0 | 4 | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| PHF Adj: | 0.76 | 0.76 | 0.76 | | | 0.76 | 0.76 | 0.76 | | | 0.76 | 0.76 | 0.76 | | | 0.76 | 0.76 | 0.76 | | |
| PHF Volume: | 0 | 162 | 52 | | | 4 | 89 | 0 | | | 0 | 0 | 0 | | | 56 | 0 | 5 | | |
| Reduct Vol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| FinalVolume: | 0 | 162 | 52 | | | 4 | 89 | 0 | | | 0 | 0 | 0 | | | 56 | 0 | 5 | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | | | 4.1 | xxxx | xxxxx | | | 7.1 | 6.5 | 6.2 | | | 6.4 | 6.5 | 6.2 | | |
| FollowUpTim: | xxxxx | xxxx | xxxxx | | | 2.2 | xxxx | xxxxx | | | 3.5 | 4.0 | 3.3 | | | 3.5 | 4.0 | 3.3 | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | | | 213 | xxxx | xxxxx | | | 287 | 310 | 89 | | | 258 | 258 | 162 | | |
| Potent Cap.: | xxxx | xxxx | xxxxx | | | 1369 | xxxx | xxxxx | | | 670 | 608 | 975 | | | 735 | 649 | 889 | | |
| Move Cap.: | xxxx | xxxx | xxxxx | | | 1369 | xxxx | xxxxx | | | 664 | 606 | 975 | | | 733 | 648 | 889 | | |
| Volume/Cap: | xxxx | xxxx | xxxx | | | 0.00 | xxxx | xxxx | | | 0.00 | 0.00 | 0.00 | | | 0.08 | 0.00 | 0.01 | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | |
| Control Del: | xxxxx | xxxx | xxxxx | | | 7.6 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| LOS by Move: | * | * | * | | | A | * | * | | | * | * | * | | | * | * | * | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | | 0 | xxxxx | | xxxx | | 745 | xxxxx | |
| SharedQueue: | 0.0 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | | 0.3 | xxxxx | |
| Shrd ConDel: | 7.2 | xxxx | xxxxx | | | 7.6 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | | 10.3 | xxxxx | |
| Shared LOS: | A | * | * | | | A | * | * | | | * | * | * | | | * | | B | * | |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | | | 10.3 | | |
| ApproachLOS: | * | | | | | * | | | | | * | | | | | | | B | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 431 | 1878 | 318 | 153 | 1383 | 100 | 237 | 121 | 160 | 59 | 74 | 375 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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) | 1805 | 5036 | 1583 | 1805 | 6346 | 1583 | 1805 | 1900 | 1586 | 1805 | 1900 | 1603 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.71 | 1.00 | 1.00 | 0.64 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5036 | 1583 | 1805 | 6346 | 1583 | 1344 | 1900 | 1586 | 1219 | 1900 | 1603 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 444 | 1936 | 328 | 158 | 1426 | 103 | 244 | 125 | 165 | 61 | 76 | 387 |
| RTOR Reduction (vph) | 0 | 0 | 138 | 0 | 0 | 67 | 0 | 0 | 121 | 0 | 0 | 11 |
| Lane Group Flow (vph) | 444 | 1936 | 190 | 158 | 1426 | 36 | 244 | 125 | 44 | 61 | 76 | 376 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Perm | NA | Perm | Perm | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | 5 |
| Permitted Phases | | | 2 | | | 6 | 8 | | 8 | 4 | | 4 |
| Actuated Green, G (s) | 33.9 | 65.7 | 65.7 | 14.0 | 45.8 | 45.8 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 68.6 |
| Effective Green, g (s) | 33.9 | 65.7 | 65.7 | 14.0 | 45.8 | 45.8 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 68.6 |
| Actuated g/C Ratio | 0.26 | 0.51 | 0.51 | 0.11 | 0.35 | 0.35 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.53 |
| Clearance Time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 470 | 2545 | 800 | 194 | 2235 | 557 | 358 | 507 | 423 | 325 | 507 | 845 |
| v/s Ratio Prot | c0.25 | c0.38 | | 0.09 | 0.22 | | | 0.07 | | | 0.04 | 0.12 |
| v/s Ratio Perm | | | 0.12 | | | 0.02 | c0.18 | | 0.03 | 0.05 | | 0.12 |
| v/c Ratio | 0.94 | 0.76 | 0.24 | 0.81 | 0.64 | 0.07 | 0.68 | 0.25 | 0.10 | 0.19 | 0.15 | 0.45 |
| Uniform Delay, d1 | 47.1 | 25.8 | 18.1 | 56.7 | 35.2 | 27.9 | 42.7 | 37.4 | 35.9 | 36.8 | 36.4 | 19.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 27.6 | 2.2 | 0.7 | 21.3 | 1.4 | 0.2 | 10.1 | 1.2 | 0.5 | 1.3 | 0.6 | 0.1 |
| Delay (s) | 74.8 | 28.0 | 18.8 | 78.1 | 36.6 | 28.1 | 52.7 | 38.5 | 36.4 | 38.0 | 37.0 | 19.1 |
| Level of Service | E | C | B | E | D | C | D | D | D | D | D | B |
| Approach Delay (s) | | 34.6 | | | 40.0 | | | 44.4 | | | 23.9 | |
| Approach LOS | | C | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 93.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 4 | 0 | 0 | 70 | 0 | 449 | 18 | 0 | 538 | 7 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 0 | 0 | 5 | 0 | 0 | 81 | 0 | 522 | 21 | 0 | 626 | 8 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | 0.97 | | | | | |
| vC, conflicting volume | 1229 | 1169 | 626 | 1152 | 1156 | 522 | 634 | | | 543 | | |
| vC1, stage 1 conf vol | 626 | 626 | | 522 | 522 | | | | | | | |
| vC2, stage 2 conf vol | 603 | 543 | | 630 | 634 | | | | | | | |
| vCu, unblocked vol | 1221 | 1159 | 601 | 1143 | 1146 | 522 | 609 | | | 543 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 99 | 100 | 100 | 85 | 100 | | | 100 | | |
| cM capacity (veh/h) | 332 | 387 | 490 | 382 | 390 | 559 | 952 | | | 1036 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 81 | 522 | 21 | 626 | 8 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 5 | 81 | 0 | 21 | 0 | 8 |
| cSH | 490 | 559 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.15 | 0.31 | 0.01 | 0.37 | 0.00 |
| Queue Length 95th (ft) | 1 | 13 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 12.4 | 12.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | B | | | | |
| Approach Delay (s) | 12.4 | 12.5 | 0.0 | | 0.0 | |
| Approach LOS | B | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 38.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 0 | 5 | 39 | 1 | 101 | 6 | 335 | 18 | 224 | 312 | 5 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 36 | 0 | 6 | 46 | 1 | 120 | 7 | 399 | 21 | 267 | 371 | 6 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1439 | 1339 | 371 | 1324 | 1324 | 399 | 377 | | | 420 | | |
| vC1, stage 1 conf vol | 905 | 905 | | 413 | 413 | | | | | | | |
| vC2, stage 2 conf vol | 534 | 435 | | 911 | 911 | | | | | | | |
| vCu, unblocked vol | 1439 | 1339 | 371 | 1324 | 1324 | 399 | 377 | | | 420 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 76 | 100 | 99 | 80 | 100 | 82 | 99 | | | 77 | | |
| cM capacity (veh/h) | 149 | 228 | 679 | 232 | 250 | 655 | 1192 | | | 1150 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 168 | 7 | 399 | 21 | 267 | 371 | 6 |
| Volume Left | 36 | 46 | 7 | 0 | 0 | 267 | 0 | 0 |
| Volume Right | 6 | 120 | 0 | 0 | 21 | 0 | 0 | 6 |
| cSH | 168 | 432 | 1192 | 1700 | 1700 | 1150 | 1700 | 1700 |
| Volume to Capacity | 0.25 | 0.39 | 0.01 | 0.23 | 0.01 | 0.23 | 0.22 | 0.00 |
| Queue Length 95th (ft) | 23 | 45 | 0 | 0 | 0 | 22 | 0 | 0 |
| Control Delay (s) | 33.5 | 18.5 | 8.0 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 |
| Lane LOS | D | C | A | | | A | | |
| Approach Delay (s) | 33.5 | 18.5 | 0.1 | | | 3.8 | | |
| Approach LOS | D | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.4 | | |
| Intersection Capacity Utilization | 48.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 61 | 5 | 5 | 8 | 5 | 32 | 2 | 268 | 11 | 55 | 247 | 55 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 69 | 6 | 6 | 9 | 6 | 36 | 2 | 301 | 12 | 62 | 278 | 62 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 783 | 750 | 308 | 752 | 775 | 307 | 339 | | | 313 | | |
| vC1, stage 1 conf vol | 432 | 432 | | 312 | 312 | | | | | | | |
| vC2, stage 2 conf vol | 351 | 318 | | 440 | 463 | | | | | | | |
| vCu, unblocked vol | 783 | 750 | 308 | 752 | 775 | 307 | 339 | | | 313 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 85 | 99 | 99 | 98 | 99 | 95 | 100 | | | 95 | | |
| cM capacity (veh/h) | 465 | 479 | 736 | 497 | 481 | 737 | 1231 | | | 1258 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 80 | 51 | 316 | 401 |
| Volume Left | 69 | 9 | 2 | 62 |
| Volume Right | 6 | 36 | 12 | 62 |
| cSH | 479 | 644 | 1231 | 1258 |
| Volume to Capacity | 0.17 | 0.08 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 15 | 6 | 0 | 4 |
| Control Delay (s) | 14.0 | 11.1 | 0.1 | 1.6 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 14.0 | 11.1 | 0.1 | 1.6 |
| Approach LOS | B | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.8 | | |
| Intersection Capacity Utilization | 54.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.417 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1 | 1 | 3 | 33 | 3 | 191 | 232 | 8 | 1 | 2 | 2 | 15 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1 | 1 | 3 | 33 | 3 | 191 | 232 | 8 | 1 | 2 | 2 | 15 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 33 | 33 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1 | 1 | 3 | 33 | 3 | 224 | 265 | 8 | 1 | 2 | 2 | 15 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 1 | 1 | 3 | 37 | 3 | 249 | 295 | 9 | 1 | 2 | 2 | 17 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1 | 1 | 3 | 37 | 3 | 249 | 295 | 9 | 1 | 2 | 2 | 17 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1 | 1 | 3 | 37 | 3 | 249 | 295 | 9 | 1 | 2 | 2 | 17 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.20 | 0.20 | 0.60 | 0.13 | 0.01 | 0.86 | 0.96 | 0.03 | 0.01 | 0.10 | 0.11 | 0.79 |
| Final Sat.: | 141 | 141 | 424 | 104 | 9 | 704 | 707 | 21 | 3 | 79 | 79 | 592 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.35 | 0.35 | 0.35 | 0.42 | 0.42 | 0.42 | 0.03 | 0.03 | 0.03 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 7.7 | 7.7 | 7.7 | 9.3 | 9.3 | 9.3 | 10.9 | 10.9 | 10.9 | 7.6 | 7.6 | 7.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 7.7 | 7.7 | 7.7 | 9.3 | 9.3 | 9.3 | 10.9 | 10.9 | 10.9 | 7.6 | 7.6 | 7.6 |
| LOS by Move: | A | A | A | A | A | A | B | B | B | A | A | A |
| ApproachDel: | 7.7 | | | 9.3 | | | 10.9 | | | 7.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 7.7 | | | 9.3 | | | 10.9 | | | 7.6 | | |
| LOS by Appr: | A | | | A | | | B | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 294 | 31 | 17 | 0 | 4 | 234 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 316 | 33 | 18 | 0 | 4 | 252 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 167 | 130 | 256 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 167 | 130 | 256 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 61 | 96 | 99 | | | |
| cM capacity (veh/h) | 817 | 925 | 1321 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 316 | 33 | 18 | 256 |
| Volume Left | 316 | 0 | 18 | 0 |
| Volume Right | 0 | 33 | 0 | 252 |
| cSH | 817 | 925 | 1321 | 1700 |
| Volume to Capacity | 0.39 | 0.04 | 0.01 | 0.15 |
| Queue Length 95th (ft) | 46 | 3 | 1 | 0 |
| Control Delay (s) | 12.2 | 9.0 | 7.8 | 0.0 |
| Lane LOS | B | A | A | |
| Approach Delay (s) | 11.9 | | 7.8 | 0.0 |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.9 | | |
| Intersection Capacity Utilization | 37.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 408 | 1287 | 438 | 169 | 936 | 73 | 383 | 160 | 287 | 223 | 182 | 386 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 0.90 | | 1.00 | 0.94 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 5031 | | 3502 | 3227 | | 1805 | 1685 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 5031 | | 3502 | 3227 | | 1805 | 1685 | 1513 |
| Peak-hour factor, PHF | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 469 | 1479 | 503 | 194 | 1076 | 84 | 440 | 184 | 330 | 256 | 209 | 444 |
| RTOR Reduction (vph) | 0 | 0 | 213 | 0 | 8 | 0 | 0 | 104 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 469 | 1479 | 290 | 194 | 1152 | 0 | 440 | 410 | 0 | 256 | 342 | 311 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1551 | | 1079 | 994 | | 255 | 238 | 296 |
| v/s Ratio Prot | c0.13 | c0.42 | | 0.11 | 0.23 | | 0.13 | c0.13 | | 0.14 | c0.20 | 0.06 |
| v/s Ratio Perm | | | 0.18 | | | | | | | | | 0.15 |
| v/c Ratio | 2.48 | 1.43 | 0.63 | 1.53 | 0.74 | | 0.41 | 0.41 | | 1.00 | 1.44 | 1.05 |
| Uniform Delay, d1 | 56.8 | 42.5 | 36.8 | 55.8 | 37.2 | | 32.8 | 32.9 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 0.99 | 0.74 | 0.66 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 679.4 | 199.5 | 5.2 | 273.1 | 3.3 | | 1.1 | 1.3 | | 57.4 | 219.0 | 66.2 |
| Delay (s) | 735.4 | 230.9 | 29.5 | 328.8 | 40.5 | | 34.0 | 34.2 | | 108.9 | 270.5 | 114.5 |
| Level of Service | F | F | C | F | D | | C | C | | F | F | F |
| Approach Delay (s) | | 286.1 | | | 81.8 | | | 34.1 | | | 171.6 | |
| Approach LOS | | F | | | F | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 176.5 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.09 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 106.9% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1926 | 171 | 0 | 1656 | 0 | 110 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2093 | 186 | 0 | 1800 | 0 | 120 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.63 | | 0.63 | 0.63 |
| vC, conflicting volume | | | 2279 | | 2636 | 1140 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 1865 | | 2427 | 69 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 81 |
| cM capacity (veh/h) | | | 208 | | 17 | 626 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 1396 | 884 | 450 | 450 | 450 | 450 | 120 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 186 | 0 | 0 | 0 | 0 | 120 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 626 |
| Volume to Capacity | 0.82 | 0.52 | 0.26 | 0.26 | 0.26 | 0.26 | 0.19 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.1 |
| Lane LOS | | | | | | | B |
| Approach Delay (s) | 0.0 | | 0.0 | | | | 12.1 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 72.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 320 | 1651 | 66 | 68 | 1302 | 184 | 169 | 12 | 29 | 265 | 12 | 165 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.89 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3502 | 3484 | | 1805 | 3505 | 1586 | 1805 | 1676 | | | 1805 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.35 | 1.00 | | | 0.70 | 1.00 |
| Satd. Flow (perm) | 3502 | 3484 | | 1805 | 3505 | 1586 | 660 | 1676 | | | 1332 | 1586 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 333 | 1720 | 69 | 71 | 1356 | 192 | 176 | 12 | 30 | 276 | 12 | 172 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 0 | 102 | 0 | 23 | 0 | 0 | 0 | 132 |
| Lane Group Flow (vph) | 333 | 1786 | 0 | 71 | 1356 | 90 | 176 | 19 | 0 | 0 | 288 | 40 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 15.2 | 56.7 | | 7.7 | 49.2 | 49.2 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 15.2 | 56.7 | | 7.7 | 49.2 | 49.2 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.14 | 0.54 | | 0.07 | 0.47 | 0.47 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 506 | 1881 | | 132 | 1642 | 743 | 155 | 394 | | | 313 | 373 |
| v/s Ratio Prot | c0.10 | c0.51 | | 0.04 | 0.39 | | | 0.01 | | | | |
| v/s Ratio Perm | | | | | | 0.06 | c0.27 | | | | 0.22 | 0.03 |
| v/c Ratio | 0.66 | 0.95 | | 0.54 | 0.83 | 0.12 | 1.14 | 0.05 | | | 0.92 | 0.11 |
| Uniform Delay, d1 | 42.4 | 22.8 | | 46.9 | 24.2 | 15.7 | 40.1 | 31.1 | | | 39.2 | 31.5 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.1 | 11.8 | | 4.2 | 4.9 | 0.3 | 113.3 | 0.1 | | | 31.0 | 0.1 |
| Delay (s) | 45.5 | 34.6 | | 51.1 | 29.1 | 16.1 | 153.5 | 31.1 | | | 70.2 | 31.6 |
| Level of Service | D | C | | D | C | B | F | C | | | E | C |
| Approach Delay (s) | | 36.4 | | | 28.5 | | | 129.9 | | | 55.8 | |
| Approach LOS | | D | | | C | | | F | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.99 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 87.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 210 | 72 | 74 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 228 | 78 | 80 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 347 | 118 | 159 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 347 | 118 | 159 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 654 | 939 | 1433 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 0 | 228 | 159 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 80 |
| cSH | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.13 | 0.09 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 14.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 200 | 4 | 4 | 10 | 10 | 62 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 217 | 4 | 4 | 11 | 11 | 67 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | None | |
| Median storage veh) | | | | 2 | | |
| Upstream signal (ft) | | | | | 753 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 64 | 45 | 78 | | | |
| vC1, stage 1 conf vol | 45 | | | | | |
| vC2, stage 2 conf vol | 20 | | | | | |
| vCu, unblocked vol | 64 | 45 | 78 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | 5.4 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 77 | 100 | 100 | | | |
| cM capacity (veh/h) | 952 | 1031 | 1533 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 222 | 15 | 78 |
| Volume Left | 217 | 4 | 0 |
| Volume Right | 4 | 0 | 67 |
| cSH | 954 | 1533 | 1700 |
| Volume to Capacity | 0.23 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 23 | 0 | 0 |
| Control Delay (s) | 9.9 | 2.1 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.9 | 2.1 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.1 | | |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 9 | 2 | 0 | 6 | 4 | 0 | 12 | 0 | 8 | 0 | 6 |
| Peak Hour Factor | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 |
| Hourly flow rate (vph) | 3 | 15 | 3 | 0 | 10 | 7 | 0 | 20 | 0 | 13 | 0 | 10 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 21 | 16 | 20 | 23 |
| Volume Left (vph) | 3 | 0 | 0 | 13 |
| Volume Right (vph) | 3 | 7 | 0 | 10 |
| Hadj (s) | -0.06 | -0.24 | 0.00 | -0.14 |
| Departure Headway (s) | 3.9 | 3.8 | 4.0 | 3.9 |
| Degree Utilization, x | 0.02 | 0.02 | 0.02 | 0.02 |
| Capacity (veh/h) | 897 | 938 | 878 | 919 |
| Control Delay (s) | 7.0 | 6.8 | 7.1 | 7.0 |
| Approach Delay (s) | 7.0 | 6.8 | 7.1 | 7.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.0 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 17.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.633
Loss Time (sec): 12 Average Delay (sec/veh): 26.6
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 47 | 2 | 4 | 15 | 2 | 27 | 30 | 1813 | 68 | 1 | 1239 | 30 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 47 | 2 | 4 | 15 | 2 | 27 | 30 | 1813 | 68 | 1 | 1239 | 30 |
| Added Vol: | 6 | 0 | 0 | 0 | 0 | 11 | 11 | 58 | 5 | 0 | 60 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 53 | 2 | 4 | 15 | 2 | 38 | 41 | 1871 | 73 | 1 | 1299 | 30 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 54 | 2 | 4 | 15 | 2 | 39 | 42 | 1905 | 74 | 1 | 1323 | 31 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 54 | 2 | 4 | 15 | 2 | 39 | 42 | 1905 | 74 | 1 | 1323 | 31 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 54 | 2 | 4 | 15 | 2 | 39 | 42 | 1905 | 74 | 1 | 1323 | 31 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.76 | 0.76 | 0.76 | 0.83 | 0.83 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.90 | 0.03 | 0.07 | 0.88 | 0.12 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1294 | 49 | 98 | 1395 | 186 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.01 | 0.01 | 0.02 | 0.02 | 0.53 | 0.05 | 0.00 | 0.37 | 0.02 |
| Crit Moves: | | **** | | | | | | **** | | **** | | |
| Green/Cycle: | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.12 | 0.58 | 0.58 | 0.08 | 0.54 | 0.54 |
| Volume/Cap: | 0.17 | 0.17 | 0.17 | 0.05 | 0.05 | 0.10 | 0.19 | 0.92 | 0.08 | 0.01 | 0.68 | 0.04 |
| Delay/Veh: | 36.2 | 36.2 | 36.2 | 34.9 | 34.9 | 35.5 | 47.8 | 30.0 | 11.4 | 50.5 | 21.4 | 13.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.2 | 36.2 | 36.2 | 34.9 | 34.9 | 35.5 | 47.8 | 30.0 | 11.4 | 50.5 | 21.4 | 13.2 |
| LOS by Move: | D | D | D | C | C | D | D | C | B | D | C | B |
| HCM2kAvgQ: | 2 | 2 | 2 | 0 | 0 | 1 | 1 | 37 | 1 | 0 | 19 | 1 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.474
Loss Time (sec): 12 Average Delay (sec/veh): 17.6
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 32 | 32 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 3 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 136 | 0 | 32 | 0 | 0 | 0 | 0 | 1590 | 186 | 36 | 1078 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 136 | 0 | 32 | 0 | 0 | 0 | 0 | 1590 | 186 | 36 | 1078 | 0 |
| Added Vol: | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 13 | 0 | 46 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 150 | 0 | 32 | 0 | 0 | 0 | 0 | 1634 | 199 | 36 | 1124 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 153 | 0 | 33 | 0 | 0 | 0 | 0 | 1666 | 203 | 37 | 1146 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 153 | 0 | 33 | 0 | 0 | 0 | 0 | 1666 | 203 | 37 | 1146 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 153 | 0 | 33 | 0 | 0 | 0 | 0 | 1666 | 203 | 37 | 1146 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1805 | 0 | 1615 | 0 | 0 | 0 | 0 | 5187 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.32 | 0.13 | 0.02 | 0.32 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.28 | 0.00 | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.54 | 0.54 | 0.08 | 0.63 | 0.00 |
| Volume/Cap: | 0.31 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.59 | 0.23 | 0.24 | 0.51 | 0.00 |
| Delay/Veh: | 34.8 | 0.0 | 32.3 | 0.0 | 0.0 | 0.0 | 0.0 | 18.9 | 14.5 | 52.3 | 12.6 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.8 | 0.0 | 32.3 | 0.0 | 0.0 | 0.0 | 0.0 | 18.9 | 14.5 | 52.3 | 12.6 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | B | D | B | A |
| HCM2kAvgQ: | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 15 | 4 | 1 | 12 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.525
Loss Time (sec): 12 Average Delay (sec/veh): 15.8
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 2 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 100 | 0 | 10 | 0 | 0 | 0 | 0 | 1459 | 158 | 13 | 1001 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 100 | 0 | 10 | 0 | 0 | 0 | 0 | 1459 | 158 | 13 | 1001 | 0 |
| Added Vol: | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 9 | 0 | 32 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 110 | 0 | 10 | 0 | 0 | 0 | 0 | 1490 | 167 | 13 | 1033 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 115 | 0 | 10 | 0 | 0 | 0 | 0 | 1559 | 175 | 14 | 1081 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 115 | 0 | 10 | 0 | 0 | 0 | 0 | 1559 | 175 | 14 | 1081 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 115 | 0 | 10 | 0 | 0 | 0 | 0 | 1559 | 175 | 14 | 1081 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.92 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 2.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 3502 | 0 | 1615 | 0 | 0 | 0 | 0 | 3610 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.11 | 0.01 | 0.30 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.23 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.59 | 0.59 | 0.08 | 0.68 | 0.00 |
| Volume/Cap: | 0.15 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.73 | 0.18 | 0.09 | 0.44 | 0.00 |
| Delay/Veh: | 37.3 | 0.0 | 36.3 | 0.0 | 0.0 | 0.0 | 0.0 | 18.9 | 11.3 | 51.1 | 9.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.3 | 0.0 | 36.3 | 0.0 | 0.0 | 0.0 | 0.0 | 18.9 | 11.3 | 51.1 | 9.2 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | A | B | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 3 | 1 | 10 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.540
Loss Time (sec): 12 Average Delay (sec/veh): 23.4
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 131 | 22 | 52 | 37 | 17 | 26 | 14 | 1074 | 301 | 78 | 852 | 41 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 131 | 22 | 52 | 37 | 17 | 26 | 14 | 1074 | 301 | 78 | 852 | 41 |
| Added Vol: | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 9 | 0 | 14 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 141 | 22 | 52 | 37 | 17 | 26 | 14 | 1087 | 310 | 78 | 866 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 154 | 24 | 57 | 40 | 19 | 28 | 15 | 1184 | 338 | 85 | 943 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 154 | 24 | 57 | 40 | 19 | 28 | 15 | 1184 | 338 | 85 | 943 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 154 | 24 | 57 | 40 | 19 | 28 | 15 | 1184 | 338 | 85 | 943 | 45 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.90 | 0.90 | 0.70 | 0.91 | 0.91 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.30 | 0.70 | 1.00 | 0.40 | 0.60 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1387 | 506 | 1195 | 1334 | 683 | 1044 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.05 | 0.05 | 0.03 | 0.03 | 0.03 | 0.01 | 0.33 | 0.21 | 0.05 | 0.26 | 0.03 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.15 | 0.53 | 0.53 | 0.08 | 0.47 | 0.47 |
| Volume/Cap: | 0.39 | 0.17 | 0.17 | 0.11 | 0.10 | 0.10 | 0.06 | 0.62 | 0.39 | 0.56 | 0.56 | 0.06 |
| Delay/Veh: | 35.3 | 32.5 | 32.5 | 31.9 | 31.8 | 31.8 | 43.9 | 20.0 | 16.8 | 57.8 | 23.5 | 17.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 35.3 | 32.5 | 32.5 | 31.9 | 31.8 | 31.8 | 43.9 | 20.0 | 16.8 | 57.8 | 23.5 | 17.5 |
| LOS by Move: | D | C | C | C | C | C | D | C | B | E | C | B |
| HCM2kAvgQ: | 5 | 2 | 2 | 1 | 1 | 1 | 0 | 16 | 7 | 4 | 13 | 1 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 0.852 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 65.4 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Added Vol: | 4 | 0 | 20 | 20 | 0 | 4 | 4 | 113 | 4 | 20 | 121 | 20 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 189 | 239 | 70 | 280 | 248 | 184 | 178 | 744 | 235 | 88 | 715 | 294 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.55 | 0.45 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2697 | 790 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.09 | 0.09 | 0.16 | 0.07 | 0.12 | 0.10 | 0.21 | 0.15 | 0.05 | 0.39 | 0.19 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.12 | 0.28 | 0.28 | 0.15 | 0.30 | 0.30 | 0.09 | 0.34 | 0.34 | 0.11 | 0.35 | 0.35 |
| Volume/Cap: | 0.91 | 0.33 | 0.33 | 1.09 | 0.23 | 0.39 | 1.09 | 0.63 | 0.44 | 0.46 | 1.09 | 0.53 |
| Delay/Veh: | 89.9 | 34.9 | 34.9 | 134.3 | 31.5 | 33.6 | 151.6 | 34.5 | 31.6 | 51.9 | 102 | 31.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 89.9 | 34.9 | 34.9 | 134.3 | 31.5 | 33.6 | 151.6 | 34.5 | 31.6 | 51.9 | 102 | 31.8 |
| LOS by Move: | F | C | C | F | C | C | F | C | C | D | F | C |
| HCM2kAvgQ: | 10 | 5 | 5 | 17 | 4 | 6 | 12 | 13 | 7 | 4 | 39 | 9 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.537 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 12.2 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 12 | 18 | 8 | 130 | 13 | 117 | 171 | 140 | 13 | 13 | 164 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 12 | 18 | 8 | 130 | 13 | 117 | 171 | 140 | 13 | 13 | 164 | 86 |
| Added Vol: | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 24 | 0 | 0 | 24 | 12 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 12 | 18 | 8 | 142 | 13 | 117 | 171 | 164 | 13 | 13 | 188 | 98 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 12 | 18 | 8 | 145 | 13 | 120 | 175 | 168 | 13 | 13 | 192 | 100 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 12 | 18 | 8 | 145 | 13 | 120 | 175 | 168 | 13 | 13 | 192 | 100 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 12 | 18 | 8 | 145 | 13 | 120 | 175 | 168 | 13 | 13 | 192 | 100 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.32 | 0.47 | 0.21 | 1.00 | 0.10 | 0.90 | 0.49 | 0.47 | 0.04 | 0.04 | 0.63 | 0.33 |
| Final Sat.: | 163 | 245 | 109 | 511 | 61 | 548 | 326 | 313 | 25 | 30 | 428 | 223 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.08 | 0.08 | 0.28 | 0.22 | 0.22 | 0.54 | 0.54 | 0.54 | 0.45 | 0.45 | 0.45 |
| Crit Moves: | **** | | | **** | | | | | **** | | **** | |
| Delay/Veh: | 9.5 | 9.5 | 9.5 | 11.8 | 9.6 | 9.6 | 13.8 | 13.8 | 13.8 | 11.9 | 11.9 | 11.9 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.5 | 9.5 | 9.5 | 11.8 | 9.6 | 9.6 | 13.8 | 13.8 | 13.8 | 11.9 | 11.9 | 11.9 |
| LOS by Move: | A | A | A | B | A | A | B | B | B | B | B | B |
| ApproachDel: | 9.5 | | | 10.8 | | | 13.8 | | | 11.9 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 9.5 | | | 10.8 | | | 13.8 | | | 11.9 | | |
| LOS by Appr: | A | | | B | | | B | | | B | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 1.0 | 1.0 | 1.0 | 0.7 | 0.7 | 0.7 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 66 | 157 | 11 | 483 | 116 | 264 | 27 | 345 | 486 | 259 | 290 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.90 | | 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) | 1805 | 5129 | | 3433 | 3197 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5129 | | 3433 | 3197 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 69 | 165 | 12 | 508 | 122 | 278 | 28 | 363 | 512 | 273 | 305 | 39 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| Lane Group Flow (vph) | 69 | 170 | 0 | 508 | 219 | 0 | 28 | 363 | 512 | 273 | 305 | 14 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.0 | | 5.5 | 40.2 | | 7.4 | 43.5 | 43.5 | 5.0 | 41.1 | 41.1 |
| Effective Green, g (s) | 5.3 | 40.0 | | 5.5 | 40.2 | | 7.4 | 43.5 | 43.5 | 5.0 | 41.1 | 41.1 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.06 | 0.38 | 0.38 | 0.04 | 0.36 | 0.36 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1784 | | 164 | 1117 | | 116 | 1365 | 577 | 78 | 1290 | 567 |
| v/s Ratio Prot | 0.04 | 0.03 | | c0.15 | c0.07 | | 0.02 | 0.10 | | c0.15 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | c0.34 | | | 0.01 |
| v/c Ratio | 0.83 | 0.10 | | 3.10 | 0.20 | | 0.24 | 0.27 | 0.89 | 3.50 | 0.24 | 0.02 |
| Uniform Delay, d1 | 54.4 | 25.3 | | 54.8 | 26.1 | | 51.1 | 24.7 | 33.5 | 55.0 | 25.9 | 24.0 |
| Progression Factor | 1.00 | 1.00 | | 0.81 | 0.38 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 46.1 | 0.1 | | 958.2 | 0.4 | | 0.4 | 0.0 | 14.9 | 1156.4 | 0.0 | 0.0 |
| Delay (s) | 100.5 | 25.4 | | 1002.4 | 10.2 | | 51.5 | 24.8 | 48.3 | 1211.4 | 26.0 | 24.0 |
| Level of Service | F | C | | F | B | | D | C | D | F | C | C |
| Approach Delay (s) | | 46.5 | | | 565.3 | | | 39.0 | | | 550.4 | |
| Approach LOS | | D | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 336.4 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.86 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 92.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): 34.9 Worst Case Level Of Service: F[1038.2]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 37 | | 0 | | 17 | | 14 | | 0 | | 8 | | 8 | | 915 | | 74 | | 12 | | 996 | | 14 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Initial Bse: | 37 | | 0 | | 17 | | 14 | | 0 | | 8 | | 8 | | 915 | | 74 | | 12 | | 996 | | 14 | |
| Added Vol: | 0 | | 0 | | 18 | | 18 | | 0 | | 0 | | 0 | | 159 | | 0 | | 18 | | 166 | | 18 | |
| PasserByVol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Initial Fut: | 37 | | 0 | | 35 | | 32 | | 0 | | 8 | | 8 | | 1074 | | 74 | | 30 | | 1162 | | 32 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 40 | | 0 | | 38 | | 35 | | 0 | | 9 | | 9 | | 1166 | | 80 | | 33 | | 1262 | | 35 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 40 | | 0 | | 38 | | 35 | | 0 | | 9 | | 9 | | 1166 | | 80 | | 33 | | 1262 | | 35 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | | 6.2 | | 7.1 | 6.5 | | 6.2 | | 4.1 | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | | 2.2 | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 2572 | 2585 | | 1206 | | 2587 | 2608 | | 1279 | | 1296 | xxxx | xxxxx | | 1246 | xxxx | xxxxx | | | | | | | |
| Potent Cap.: | 18 | 26 | | 226 | | 17 | 25 | | 205 | | 541 | xxxx | xxxxx | | 565 | xxxx | xxxxx | | | | | | | |
| Move Cap.: | 16 | 24 | | 226 | | 13 | 23 | | 205 | | 541 | xxxx | xxxxx | | 565 | xxxx | xxxxx | | | | | | | |
| Volume/Cap: | 2.53 | 0.00 | | 0.17 | | 2.59 | 0.00 | | 0.04 | | 0.02 | xxxx | xxxx | | 0.06 | xxxx | xxxx | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | 0.6 | | xxxx | xxxx | | 0.1 | | 0.0 | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | |
| Control Del: | xxxxx | xxxx | | 24.1 | | xxxxx | xxxx | | 23.4 | | 11.8 | xxxx | xxxxx | | 11.8 | xxxx | xxxxx | | | | | | | |
| LOS by Move: | * | * | | C | | * | * | | C | | B | * | * | | B | * | * | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 16 | xxxx | xxxxx | | | | 13 | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | 5.7 | xxxx | xxxxx | | | | 5.2 | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | |
| Shrd ConDel: | 1192 | xxxx | xxxxx | | | | 1292 | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | |
| Shared LOS: | F | * | | * | | | F | * | | * | | | * | * | | * | | | * | * | | * | | |
| ApproachDel: | 624.2 | | | | | | 1038.2 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | F | | | | | | F | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 115 | Critical Vol./Cap.(X): 1.021
Loss Time (sec): 12 | Average Delay (sec/veh): 48.0
Optimal Cycle: OPTIMIZED | Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 | 0 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 895 | 277 | 53 | 21 | 235 | 122 | 94 | 36 | 830 | 48 | 28 | 16 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 895 | 277 | 53 | 21 | 235 | 122 | 94 | 36 | 830 | 48 | 28 | 16 |
| Added Vol: | 193 | 18 | 0 | 0 | 18 | 9 | 9 | 0 | 186 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1088 | 295 | 53 | 21 | 253 | 131 | 103 | 36 | 1016 | 48 | 28 | 16 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 1179 | 320 | 57 | 23 | 274 | 142 | 112 | 39 | 1101 | 52 | 30 | 17 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1179 | 320 | 57 | 23 | 274 | 142 | 112 | 39 | 1101 | 52 | 30 | 17 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1179 | 320 | 57 | 23 | 274 | 142 | 112 | 39 | 1101 | 52 | 30 | 17 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.98 | 0.98 | 0.95 | 1.00 | 0.85 | 0.68 | 0.68 | 0.85 | 0.45 | 0.45 | 0.45 |
| Lanes: | 1.00 | 0.85 | 0.15 | 1.00 | 1.00 | 1.00 | 0.74 | 0.26 | 1.00 | 0.53 | 0.30 | 0.17 |
| Final Sat.: | 1805 | 1574 | 283 | 1805 | 1900 | 1615 | 956 | 334 | 1615 | 448 | 262 | 149 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.65 | 0.20 | 0.20 | 0.01 | 0.14 | 0.09 | 0.12 | 0.12 | 0.68 | 0.12 | 0.12 | 0.12 |
| Crit Moves: | **** | | | | **** | | | **** | | | | |
| Green/Cycle: | 0.64 | 0.64 | 0.64 | 0.14 | 0.14 | 0.14 | 0.11 | 0.11 | 0.75 | 0.11 | 0.11 | 0.11 |
| Volume/Cap: | 1.02 | 0.32 | 0.32 | 0.09 | 1.02 | 0.62 | 1.02 | 1.02 | 0.90 | 1.01 | 1.01 | 1.01 |
| Delay/Veh: | 52.5 | 9.5 | 9.5 | 43.1 | 110 | 51.7 | 130.5 | 131 | 20.5 | 145.5 | 146 | 145.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 52.5 | 9.5 | 9.5 | 43.1 | 110 | 51.7 | 130.5 | 131 | 20.5 | 145.5 | 146 | 145.5 |
| LOS by Move: | D | A | A | D | F | D | F | F | C | F | F | F |
| HCM2kAvgQ: | 51 | 6 | 6 | 1 | 15 | 6 | 9 | 9 | 34 | 7 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 209 | 315 | 59 | 140 | 255 | 944 | 57 | 123 | 128 | 1213 | 106 | 39 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3319 | | 3303 | 1792 | 2816 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3319 | | 3303 | 1792 | 2816 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| 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) | 227 | 342 | 64 | 152 | 277 | 1026 | 62 | 134 | 139 | 1318 | 115 | 42 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 109 | 0 | 0 | 83 | 0 | 0 | 22 |
| Lane Group Flow (vph) | 227 | 393 | 0 | 152 | 277 | 917 | 62 | 134 | 56 | 1318 | 115 | 20 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 7% | 0% | 6% | 6% | 0% | 0% | 0% | 8% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.1 | 26.4 | | 9.9 | 25.5 | 75.4 | 7.5 | 14.7 | 24.6 | 49.9 | 57.1 | 57.1 |
| Effective Green, g (s) | 10.1 | 26.4 | | 9.9 | 25.5 | 75.4 | 7.5 | 14.7 | 24.6 | 49.9 | 57.1 | 57.1 |
| Actuated g/C Ratio | 0.08 | 0.22 | | 0.08 | 0.21 | 0.63 | 0.06 | 0.12 | 0.21 | 0.42 | 0.48 | 0.48 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 294 | 730 | | 272 | 380 | 1769 | 112 | 232 | 306 | 1456 | 1717 | 754 |
| v/s Ratio Prot | c0.06 | 0.12 | | 0.05 | c0.15 | 0.22 | 0.03 | c0.07 | 0.01 | c0.38 | 0.03 | |
| v/s Ratio Perm | | | | | | 0.11 | | | 0.02 | | | 0.01 |
| v/c Ratio | 0.77 | 0.54 | | 0.56 | 0.73 | 0.52 | 0.55 | 0.58 | 0.18 | 0.91 | 0.07 | 0.03 |
| Uniform Delay, d1 | 53.8 | 41.4 | | 52.9 | 44.0 | 12.3 | 54.6 | 49.7 | 39.4 | 32.8 | 17.0 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.9 | 0.4 | | 1.4 | 5.8 | 0.1 | 3.3 | 10.1 | 0.1 | 8.1 | 0.1 | 0.1 |
| Delay (s) | 64.7 | 41.8 | | 54.4 | 49.9 | 12.4 | 58.0 | 59.8 | 39.5 | 41.0 | 17.1 | 16.8 |
| Level of Service | E | D | | D | D | B | E | E | D | D | B | B |
| Approach Delay (s) | | 50.0 | | | 23.9 | | | 51.0 | | | 38.4 | |
| Approach LOS | | D | | | C | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 80.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 96 | 732 | 74 | 290 | 746 | 139 | 38 | 64 | 193 | 235 | 110 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.98 | | 1.00 | 0.89 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 5016 | | 3502 | 3457 | | 1799 | 3164 | | 1799 | 3361 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.63 | 1.00 | | 0.56 | 1.00 | |
| Satd. Flow (perm) | 1805 | 5016 | | 3502 | 3457 | | 1189 | 3164 | | 1066 | 3361 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 100 | 762 | 77 | 302 | 777 | 145 | 40 | 67 | 201 | 245 | 115 | 82 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 11 | 0 | 0 | 148 | 0 | 0 | 60 | 0 |
| Lane Group Flow (vph) | 100 | 831 | 0 | 302 | 911 | 0 | 40 | 120 | 0 | 245 | 137 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 10.6 | 57.8 | | 10.5 | 57.7 | | 30.2 | 30.2 | | 30.2 | 30.2 | |
| Effective Green, g (s) | 10.6 | 57.8 | | 10.5 | 57.7 | | 30.2 | 30.2 | | 30.2 | 30.2 | |
| Actuated g/C Ratio | 0.09 | 0.50 | | 0.09 | 0.50 | | 0.26 | 0.26 | | 0.26 | 0.26 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 166 | 2521 | | 319 | 1734 | | 312 | 830 | | 279 | 882 | |
| v/s Ratio Prot | c0.06 | 0.17 | | c0.09 | c0.26 | | | 0.04 | | | 0.04 | |
| v/s Ratio Perm | | | | | | | 0.03 | | | c0.23 | | |
| v/c Ratio | 0.60 | 0.33 | | 0.95 | 0.53 | | 0.13 | 0.14 | | 0.88 | 0.15 | |
| Uniform Delay, d1 | 50.2 | 17.0 | | 52.0 | 19.4 | | 32.4 | 32.5 | | 40.6 | 32.6 | |
| Progression Factor | 0.92 | 0.48 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.4 | 0.0 | | 35.8 | 1.1 | | 0.1 | 0.0 | | 24.6 | 0.0 | |
| Delay (s) | 46.3 | 8.3 | | 87.8 | 20.5 | | 32.4 | 32.5 | | 65.2 | 32.6 | |
| Level of Service | D | A | | F | C | | C | C | | E | C | |
| Approach Delay (s) | | 12.3 | | | 37.1 | | | 32.5 | | | 50.7 | |
| Approach LOS | | B | | | D | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 75.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 269 | 266 | 42 | 330 | 0 | 0 | 0 | 0 | 49 | 0 | 210 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Hourly flow rate (vph) | 0 | 286 | 283 | 45 | 351 | 0 | 0 | 0 | 0 | 52 | 0 | 223 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 286 | 283 | 45 | 351 | 276 |
| Volume Left (vph) | 0 | 0 | 45 | 0 | 52 |
| Volume Right (vph) | 0 | 283 | 0 | 0 | 223 |
| Hadj (s) | 0.07 | -0.58 | 0.50 | 0.00 | -0.41 |
| Departure Headway (s) | 5.4 | 3.2 | 6.2 | 5.6 | 5.2 |
| Degree Utilization, x | 0.43 | 0.25 | 0.08 | 0.55 | 0.40 |
| Capacity (veh/h) | 630 | 1112 | 563 | 618 | 629 |
| Control Delay (s) | 12.5 | 7.3 | 8.5 | 14.1 | 11.7 |
| Approach Delay (s) | 9.9 | | 13.5 | | 11.7 |
| Approach LOS | A | | B | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 11.5 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1091 | 565 | 745 | 1427 | 0 | 0 | 0 | 0 | 551 | 0 | 243 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.96 | 1.00 |
| Satd. Flow (prot) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1596 | 1490 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.96 | 1.00 |
| Satd. Flow (perm) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1596 | 1490 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 1113 | 577 | 760 | 1456 | 0 | 0 | 0 | 0 | 562 | 0 | 248 |
| RTOR Reduction (vph) | 0 | 0 | 298 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 58 |
| Lane Group Flow (vph) | 0 | 1113 | 279 | 760 | 1456 | 0 | 0 | 0 | 0 | 292 | 237 | 165 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 3% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 46.3 | 46.3 | 26.0 | 76.9 | | | | | 22.1 | 22.1 | 22.1 |
| Effective Green, g (s) | | 46.3 | 46.3 | 26.0 | 76.9 | | | | | 22.1 | 22.1 | 22.1 |
| Actuated g/C Ratio | | 0.42 | 0.42 | 0.24 | 0.70 | | | | | 0.20 | 0.20 | 0.20 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1489 | 666 | 811 | 2498 | | | | | 337 | 320 | 299 |
| v/s Ratio Prot | | c0.31 | | c0.22 | 0.41 | | | | | c0.17 | 0.15 | 0.11 |
| v/s Ratio Perm | | | 0.18 | | | | | | | | | |
| v/c Ratio | | 0.75 | 0.42 | 0.94 | 0.58 | | | | | 0.87 | 0.74 | 0.55 |
| Uniform Delay, d1 | | 26.9 | 22.4 | 41.2 | 8.4 | | | | | 42.5 | 41.3 | 39.5 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 3.5 | 1.9 | 17.8 | 1.0 | | | | | 19.6 | 7.9 | 1.3 |
| Delay (s) | | 30.4 | 24.3 | 59.0 | 9.4 | | | | | 62.1 | 49.2 | 40.8 |
| Level of Service | | C | C | E | A | | | | | E | D | D |
| Approach Delay (s) | | 28.3 | | | 26.4 | | | 0.0 | | | 51.5 | |
| Approach LOS | | C | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 87.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 289 | 153 | 68 | 289 | 0 | 0 | 0 | 0 | 28 | 0 | 123 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 301 | 159 | 71 | 301 | 0 | 0 | 0 | 0 | 29 | 0 | 128 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 301 | | | 460 | | | 808 | 744 | 301 | 744 | 903 | 301 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 301 | | | 460 | | | 808 | 744 | 301 | 744 | 903 | 301 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 94 | | | 100 | 100 | 100 | 91 | 100 | 83 |
| cM capacity (veh/h) | 1272 | | | 1090 | | | 237 | 323 | 743 | 317 | 261 | 736 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 301 | 159 | 71 | 301 | 157 |
| Volume Left | 0 | 0 | 71 | 0 | 29 |
| Volume Right | 0 | 159 | 0 | 0 | 128 |
| cSH | 1700 | 1700 | 1090 | 1700 | 904 |
| Volume to Capacity | 0.18 | 0.09 | 0.06 | 0.18 | 0.17 |
| Queue Length 95th (ft) | 0 | 0 | 5 | 0 | 16 |
| Control Delay (s) | 0.0 | 0.0 | 8.5 | 0.0 | 12.1 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.6 | | 12.1 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 919 | 240 | 414 | 762 | 0 | 0 | 0 | 0 | 976 | 2 | 412 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3574 | 1583 | 1770 | 3574 | | | | | 3467 | 1493 | 1490 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3574 | 1583 | 1770 | 3574 | | | | | 3467 | 1493 | 1490 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 938 | 245 | 422 | 778 | 0 | 0 | 0 | 0 | 996 | 2 | 420 |
| RTOR Reduction (vph) | 0 | 0 | 163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 167 | 167 |
| Lane Group Flow (vph) | 0 | 938 | 82 | 422 | 778 | 0 | 0 | 0 | 0 | 996 | 45 | 43 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 34.7 | 34.7 | 45.4 | 84.7 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.38 | 0.71 | | | | | 0.21 | 0.21 | 0.21 |
| Clearance Time (s) | | 5.3 | 5.3 | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1033 | 457 | 669 | 2522 | | | | | 713 | 307 | 306 |
| v/s Ratio Prot | | c0.26 | | c0.24 | 0.22 | | | | | c0.29 | 0.03 | |
| v/s Ratio Perm | | | 0.05 | | | | | | | | | 0.03 |
| v/c Ratio | | 0.91 | 0.18 | 0.63 | 0.31 | | | | | 1.40 | 0.15 | 0.14 |
| Uniform Delay, d1 | | 41.1 | 32.0 | 30.5 | 6.6 | | | | | 47.6 | 39.0 | 39.0 |
| Progression Factor | | 1.00 | 1.00 | 0.78 | 1.03 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 13.1 | 0.9 | 1.0 | 0.2 | | | | | 187.1 | 0.1 | 0.1 |
| Delay (s) | | 54.2 | 32.8 | 24.9 | 7.1 | | | | | 234.7 | 39.1 | 39.1 |
| Level of Service | | D | C | C | A | | | | | F | D | D |
| Approach Delay (s) | | 49.8 | | | 13.3 | | | 0.0 | | | 176.5 | |
| Approach LOS | | D | | | B | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 85.6 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.90 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 88.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 205 | 113 | 0 | 0 | 115 | 19 | 257 | 0 | 22 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 209 | 115 | 0 | 0 | 117 | 19 | 262 | 0 | 22 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 137 | | | 115 | | | 661 | 670 | 115 | 683 | 661 | 127 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 137 | | | 115 | | | 661 | 670 | 115 | 683 | 661 | 127 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 86 | | | 100 | | | 22 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1460 | | | 1486 | | | 337 | 326 | 943 | 318 | 330 | 929 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 209 | 115 | 137 | 285 |
| Volume Left | 209 | 0 | 0 | 262 |
| Volume Right | 0 | 0 | 19 | 22 |
| cSH | 1460 | 1700 | 1700 | 355 |
| Volume to Capacity | 0.14 | 0.07 | 0.08 | 0.80 |
| Queue Length 95th (ft) | 13 | 0 | 0 | 171 |
| Control Delay (s) | 7.9 | 0.0 | 0.0 | 45.7 |
| Lane LOS | A | | | E |
| Approach Delay (s) | 5.1 | | 0.0 | 45.7 |
| Approach LOS | | | | E |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 19.6 | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 111 | 1511 | 0 | 0 | 1652 | 546 | 521 | 0 | 822 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.87 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (prot) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1461 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 | | | |
| Satd. Flow (perm) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1461 | 1504 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 113 | 1542 | 0 | 0 | 1686 | 557 | 532 | 0 | 839 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 304 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 113 | 1542 | 0 | 0 | 1686 | 253 | 479 | 383 | 381 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 1% | 2% | 3% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 8.9 | 54.3 | | | 40.8 | 40.8 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 8.9 | 54.3 | | | 40.8 | 40.8 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.10 | 0.60 | | | 0.45 | 0.45 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 178 | 3067 | | | 2328 | 704 | 456 | 400 | 412 | | | |
| v/s Ratio Prot | c0.06 | 0.30 | | | c0.33 | | c0.29 | 0.26 | 0.25 | | | |
| v/s Ratio Perm | | | | | | 0.16 | | | | | | |
| v/c Ratio | 0.63 | 0.50 | | | 0.72 | 0.36 | 1.05 | 0.96 | 0.93 | | | |
| Uniform Delay, d1 | 39.0 | 10.2 | | | 20.0 | 16.1 | 32.6 | 32.1 | 31.8 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 5.3 | 0.6 | | | 2.0 | 1.4 | 56.0 | 33.6 | 26.1 | | | |
| Delay (s) | 44.3 | 10.8 | | | 22.0 | 17.5 | 88.7 | 65.7 | 57.8 | | | |
| Level of Service | D | B | | | C | B | F | E | E | | | |
| Approach Delay (s) | | 13.0 | | | 20.9 | | | 71.2 | | | 0.0 | |
| Approach LOS | | B | | | C | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 87.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 130 | 187 | 0 | 0 | 190 | 2 | 168 | 0 | 92 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 140 | 201 | 0 | 0 | 204 | 2 | 181 | 0 | 99 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 206 | | | 201 | | | 686 | 687 | 201 | 785 | 686 | 205 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 206 | | | 201 | | | 686 | 687 | 201 | 785 | 686 | 205 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 46 | 100 | 88 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1365 | | | 1383 | | | 332 | 334 | 842 | 254 | 335 | 840 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 140 | 201 | 206 | 280 |
| Volume Left | 140 | 0 | 0 | 181 |
| Volume Right | 0 | 0 | 2 | 99 |
| cSH | 1365 | 1700 | 1700 | 423 |
| Volume to Capacity | 0.10 | 0.12 | 0.12 | 0.66 |
| Queue Length 95th (ft) | 9 | 0 | 0 | 116 |
| Control Delay (s) | 7.9 | 0.0 | 0.0 | 28.7 |
| Lane LOS | A | | | D |
| Approach Delay (s) | 3.3 | | 0.0 | 28.7 |
| Approach LOS | | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 11.0 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 365 | 1530 | 0 | 0 | 1009 | 956 | 167 | 4 | 440 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | | 1.00 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.96 | 0.85 | | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3467 | 5136 | | | 3290 | 1455 | | 1794 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3467 | 5136 | | | 3290 | 1455 | | 1794 | 2814 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 372 | 1561 | 0 | 0 | 1030 | 976 | 170 | 4 | 449 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 26 | 248 | 0 | 0 | 101 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 372 | 1561 | 0 | 0 | 1365 | 367 | 0 | 174 | 348 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 91.7 | | | 71.7 | 71.7 | | 17.7 | 17.7 | | | |
| Effective Green, g (s) | 15.4 | 91.7 | | | 71.7 | 71.7 | | 17.7 | 17.7 | | | |
| Actuated g/C Ratio | 0.13 | 0.76 | | | 0.60 | 0.60 | | 0.15 | 0.15 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 444 | 3924 | | | 1965 | 869 | | 264 | 415 | | | |
| v/s Ratio Prot | c0.11 | 0.30 | | | c0.41 | | | 0.10 | | | | |
| v/s Ratio Perm | | | | | | 0.25 | | | c0.12 | | | |
| v/c Ratio | 0.84 | 0.40 | | | 0.69 | 0.42 | | 0.66 | 0.84 | | | |
| Uniform Delay, d1 | 51.1 | 4.8 | | | 16.6 | 13.0 | | 48.3 | 49.8 | | | |
| Progression Factor | 1.84 | 1.31 | | | 0.88 | 4.95 | | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 7.7 | 0.0 | | | 1.3 | 1.0 | | 4.5 | 13.3 | | | |
| Delay (s) | 101.5 | 6.3 | | | 15.9 | 65.4 | | 52.8 | 63.1 | | | |
| Level of Service | F | A | | | B | E | | D | E | | | |
| Approach Delay (s) | | 24.6 | | | 31.1 | | | 60.2 | | | 0.0 | |
| Approach LOS | | C | | | C | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 32.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 88.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[ 10.1]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 93 | 22 | | 1 | 78 | | 0 | | 0 | 0 | | 0 | | 0 | 21 | | 0 | | 1 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Initial Bse: | 0 | 93 | 22 | | 1 | 78 | | 0 | | 0 | 0 | | 0 | | 0 | 21 | | 0 | | 1 |
| Added Vol: | 0 | 13 | 20 | | 0 | 14 | | 0 | | 0 | 0 | | 0 | | 0 | 20 | | 0 | | 0 |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 106 | 42 | | 1 | 92 | | 0 | | 0 | 0 | | 0 | | 0 | 41 | | 0 | | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.84 | 0.84 | 0.84 | | 0.84 | 0.84 | | 0.84 | | 0.84 | 0.84 | | 0.84 | | 0.84 | 0.84 | | 0.84 | | 0.84 |
| PHF Volume: | 0 | 127 | 50 | | 1 | 110 | | 0 | | 0 | 0 | | 0 | | 0 | 49 | | 0 | | 1 |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 127 | 50 | | 1 | 110 | | 0 | | 0 | 0 | | 0 | | 0 | 49 | | 0 | | 1 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | | xxxxx | | 7.1 | 6.5 | | 6.2 | | 6.4 | 6.5 | | 6.2 | | |
| FollowUpTim: | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | | 177 | xxxx | | xxxxx | | 265 | 290 | | 110 | | 240 | 240 | | 127 | | |
| Potent Cap.: | xxxx | xxxx | xxxxx | | 1411 | xxxx | | xxxxx | | 692 | 624 | | 949 | | 753 | 665 | | 929 | | |
| Move Cap.: | xxxx | xxxx | xxxxx | | 1411 | xxxx | | xxxxx | | 690 | 623 | | 949 | | 753 | 665 | | 929 | | |
| Volume/Cap: | xxxx | xxxx | xxxx | | 0.00 | xxxx | | xxxx | | 0.00 | 0.00 | | 0.00 | | 0.07 | 0.00 | | 0.00 | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | | 0.0 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | |
| Control Del: | xxxxx | xxxx | xxxxx | | 7.6 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | |
| LOS by Move: | * | * | * | | A | * | | * | | * | * | | * | | * | * | | * | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | 0 | | xxxxx | | xxxx | 756 | | xxxxx | | |
| SharedQueue: | 0.0 | xxxx | xxxxx | | 0.0 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | 0.2 | | xxxxx | | |
| Shrd ConDel: | 7.2 | xxxx | xxxxx | | 7.6 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | 10.1 | | xxxxx | | |
| Shared LOS: | A | * | * | | A | * | | * | | * | * | | * | | * | B | | * | | |
| ApproachDel: | xxxxxx | | | | xxxxxx | | | | | xxxxxx | | | | | 10.1 | | | | | |
| ApproachLOS: | * | | | | * | | | | | * | | | | | B | | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 487 | 1648 | 220 | 96 | 1489 | 87 | 276 | 132 | 78 | 62 | 70 | 434 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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) | 1805 | 5036 | 1583 | 1805 | 6408 | 1583 | 1805 | 1900 | 1586 | 1805 | 1900 | 1603 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.71 | 1.00 | 1.00 | 0.62 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5036 | 1583 | 1805 | 6408 | 1583 | 1350 | 1900 | 1586 | 1185 | 1900 | 1603 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 497 | 1682 | 224 | 98 | 1519 | 89 | 282 | 135 | 80 | 63 | 71 | 443 |
| RTOR Reduction (vph) | 0 | 0 | 104 | 0 | 0 | 59 | 0 | 0 | 59 | 0 | 0 | 11 |
| Lane Group Flow (vph) | 497 | 1682 | 120 | 98 | 1519 | 30 | 282 | 135 | 21 | 63 | 71 | 432 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Perm | NA | Perm | Perm | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | 5 |
| Permitted Phases | | | 2 | | | 6 | 8 | | 8 | 4 | | 4 |
| Actuated Green, G (s) | 35.4 | 68.4 | 68.4 | 11.3 | 44.3 | 44.3 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 70.1 |
| Effective Green, g (s) | 35.4 | 68.4 | 68.4 | 11.3 | 44.3 | 44.3 | 34.7 | 34.7 | 34.7 | 34.7 | 34.7 | 70.1 |
| Actuated g/C Ratio | 0.27 | 0.53 | 0.53 | 0.09 | 0.34 | 0.34 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.54 |
| Clearance Time (s) | 4.6 | 5.7 | 5.7 | 4.6 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.6 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 491 | 2649 | 832 | 156 | 2183 | 539 | 360 | 507 | 423 | 316 | 507 | 864 |
| v/s Ratio Prot | c0.28 | 0.33 | | 0.05 | c0.24 | | | 0.07 | | | 0.04 | 0.14 |
| v/s Ratio Perm | | | 0.08 | | | 0.02 | c0.21 | | 0.01 | 0.05 | | 0.13 |
| v/c Ratio | 1.01 | 0.63 | 0.14 | 0.63 | 0.70 | 0.06 | 0.78 | 0.27 | 0.05 | 0.20 | 0.14 | 0.50 |
| Uniform Delay, d1 | 47.3 | 21.9 | 15.8 | 57.3 | 37.0 | 28.8 | 44.2 | 37.6 | 35.4 | 36.9 | 36.3 | 18.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 43.7 | 1.2 | 0.4 | 5.6 | 1.9 | 0.2 | 15.6 | 1.3 | 0.2 | 1.4 | 0.6 | 0.2 |
| Delay (s) | 91.0 | 23.1 | 16.2 | 62.9 | 38.9 | 29.0 | 59.8 | 38.9 | 35.6 | 38.3 | 36.9 | 19.1 |
| Level of Service | F | C | B | E | D | C | E | D | D | D | D | B |
| Approach Delay (s) | | 36.5 | | | 39.8 | | | 50.2 | | | 23.4 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 37.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 97.6% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 11 | 0 | 0 | 94 | 0 | 333 | 24 | 0 | 340 | 17 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 0 | 0 | 12 | 0 | 0 | 101 | 0 | 358 | 26 | 0 | 366 | 18 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | | 0.98 | | | | | |
| vC, conflicting volume | 825 | 749 | 366 | 735 | 742 | 358 | 384 | | | 384 | | |
| vC1, stage 1 conf vol | 366 | 366 | | 358 | 358 | | | | | | | |
| vC2, stage 2 conf vol | 459 | 384 | | 377 | 384 | | | | | | | |
| vCu, unblocked vol | 809 | 732 | 339 | 717 | 724 | 358 | 357 | | | 384 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 98 | 100 | 100 | 85 | 100 | | | 100 | | |
| cM capacity (veh/h) | 443 | 516 | 692 | 534 | 519 | 691 | 1184 | | | 1186 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 12 | 101 | 358 | 26 | 366 | 18 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 12 | 101 | 0 | 26 | 0 | 18 |
| cSH | 692 | 691 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.02 | 0.15 | 0.21 | 0.02 | 0.22 | 0.01 |
| Queue Length 95th (ft) | 1 | 13 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 10.3 | 11.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | B | | | | |
| Approach Delay (s) | 10.3 | 11.1 | 0.0 | | 0.0 | |
| Approach LOS | B | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.4 | | |
| Intersection Capacity Utilization | 30.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 24 | 0 | 10 | 58 | 0 | 127 | 6 | 263 | 27 | 196 | 178 | 7 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 26 | 0 | 11 | 64 | 0 | 140 | 7 | 289 | 30 | 215 | 196 | 8 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1068 | 958 | 196 | 940 | 936 | 289 | 203 | | | 319 | | |
| vC1, stage 1 conf vol | 626 | 626 | | 302 | 302 | | | | | | | |
| vC2, stage 2 conf vol | 442 | 332 | | 637 | 634 | | | | | | | |
| vCu, unblocked vol | 1068 | 958 | 196 | 940 | 936 | 289 | 203 | | | 319 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 89 | 100 | 99 | 82 | 100 | 82 | 100 | | | 83 | | |
| cM capacity (veh/h) | 245 | 337 | 851 | 355 | 363 | 755 | 1380 | | | 1253 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 37 | 203 | 7 | 289 | 30 | 215 | 196 | 8 |
| Volume Left | 26 | 64 | 7 | 0 | 0 | 215 | 0 | 0 |
| Volume Right | 11 | 140 | 0 | 0 | 30 | 0 | 0 | 8 |
| cSH | 310 | 558 | 1380 | 1700 | 1700 | 1253 | 1700 | 1700 |
| Volume to Capacity | 0.12 | 0.36 | 0.00 | 0.17 | 0.02 | 0.17 | 0.12 | 0.00 |
| Queue Length 95th (ft) | 10 | 41 | 0 | 0 | 0 | 15 | 0 | 0 |
| Control Delay (s) | 18.2 | 15.1 | 7.6 | 0.0 | 0.0 | 8.5 | 0.0 | 0.0 |
| Lane LOS | C | C | A | | | A | | |
| Approach Delay (s) | 18.2 | 15.1 | 0.2 | | | 4.4 | | |
| Approach LOS | C | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.7 | | |
| Intersection Capacity Utilization | 45.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 35 | 5 | 5 | 6 | 5 | 25 | 5 | 237 | 4 | 28 | 201 | 17 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 36 | 5 | 5 | 6 | 5 | 26 | 5 | 247 | 4 | 29 | 209 | 18 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 565 | 538 | 218 | 544 | 545 | 249 | 227 | | | 251 | | |
| vC1, stage 1 conf vol | 277 | 277 | | 259 | 259 | | | | | | | |
| vC2, stage 2 conf vol | 288 | 261 | | 284 | 285 | | | | | | | |
| vCu, unblocked vol | 565 | 538 | 218 | 544 | 545 | 249 | 227 | | | 251 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 94 | 99 | 99 | 99 | 99 | 97 | 100 | | | 98 | | |
| cM capacity (veh/h) | 582 | 577 | 827 | 610 | 581 | 795 | 1353 | | | 1326 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 47 | 38 | 256 | 256 |
| Volume Left | 36 | 6 | 5 | 29 |
| Volume Right | 5 | 26 | 4 | 18 |
| cSH | 601 | 722 | 1353 | 1326 |
| Volume to Capacity | 0.08 | 0.05 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 6 | 4 | 0 | 2 |
| Control Delay (s) | 11.5 | 10.3 | 0.2 | 1.1 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 11.5 | 10.3 | 0.2 | 1.1 |
| Approach LOS | B | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.1 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.331 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.0 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - R | L | - | T | - R | L | - | T | - R | L | - | T | - R |
| Control: | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 | 0 | 0 | 0 1 | 0 | 0 | 1! | 0 0 | 0 | 0 | 1! | 0 0 | 0 | 0 | 1! | 0 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 4 | 3 | 4 | 157 | 184 | 2 | 1 | 1 | 4 | 15 | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| Initial Bse: | 0 | 0 | 4 | 3 | 4 | 157 | 184 | 2 | 1 | 1 | 4 | 15 | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 0 | 0 | 4 | 3 | 4 | 205 | 232 | 2 | 1 | 1 | 4 | 15 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | | | | |
| PHF Volume: | 0 | 0 | 4 | 3 | 4 | 219 | 248 | 2 | 1 | 1 | 4 | 16 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Reduced Vol: | 0 | 0 | 4 | 3 | 4 | 219 | 248 | 2 | 1 | 1 | 4 | 16 | | | | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| FinalVolume: | 0 | 0 | 4 | 3 | 4 | 219 | 248 | 2 | 1 | 1 | 4 | 16 | | | | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| Lanes: | 0.00 | 0.00 | 1.00 | 0.01 | 0.02 | 0.97 | 0.98 | 0.01 | 0.01 | 0.05 | 0.20 | 0.75 | | | | |
| Final Sat.: | 0 | 0 | 802 | 12 | 16 | 838 | 750 | 6 | 3 | 40 | 161 | 602 | | | | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | xxxx | xxxx | 0.01 | 0.26 | 0.26 | 0.26 | 0.33 | 0.33 | 0.33 | 0.03 | 0.03 | 0.03 | | | | |
| Crit Moves: | | | **** | | **** | | **** | | | | **** | | | | | |
| Delay/Veh: | 0.0 | 0.0 | 7.2 | 8.3 | 8.3 | 8.3 | 9.7 | 9.7 | 9.7 | 7.3 | 7.3 | 7.3 | | | | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| AdjDel/Veh: | 0.0 | 0.0 | 7.2 | 8.3 | 8.3 | 8.3 | 9.7 | 9.7 | 9.7 | 7.3 | 7.3 | 7.3 | | | | |
| LOS by Move: | * | * | A | A | A | A | A | A | A | A | A | A | | | | |
| ApproachDel: | 7.2 | | | 8.3 | | | 9.7 | | | 7.3 | | | | | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | | | | | |
| ApprAdjDel: | 7.2 | | | 8.3 | | | 9.7 | | | 7.3 | | | | | | |
| LOS by Appr: | A | | | A | | | A | | | A | | | | | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 240 | 38 | 26 | 2 | 8 | 165 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 270 | 43 | 29 | 2 | 9 | 185 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 162 | 102 | 194 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 162 | 102 | 194 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 67 | 96 | 98 | | | |
| cM capacity (veh/h) | 813 | 959 | 1379 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 270 | 43 | 31 | 194 |
| Volume Left | 270 | 0 | 29 | 0 |
| Volume Right | 0 | 43 | 0 | 185 |
| cSH | 813 | 959 | 1379 | 1700 |
| Volume to Capacity | 0.33 | 0.04 | 0.02 | 0.11 |
| Queue Length 95th (ft) | 36 | 3 | 2 | 0 |
| Control Delay (s) | 11.6 | 8.9 | 7.1 | 0.0 |
| Lane LOS | B | A | A | |
| Approach Delay (s) | 11.2 | | 7.1 | 0.0 |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.9 | | |
| Intersection Capacity Utilization | 37.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 376 | 1084 | 511 | 221 | 1091 | 105 | 479 | 174 | 264 | 138 | 159 | 395 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 0.91 | | 1.00 | 0.93 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 4975 | | 3502 | 3251 | | 1805 | 1666 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 4975 | | 3502 | 3251 | | 1805 | 1666 | 1513 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 384 | 1106 | 521 | 226 | 1113 | 107 | 489 | 178 | 269 | 141 | 162 | 403 |
| RTOR Reduction (vph) | 0 | 0 | 295 | 0 | 10 | 0 | 0 | 146 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 384 | 1106 | 226 | 226 | 1210 | 0 | 489 | 301 | 0 | 141 | 295 | 270 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1533 | | 1079 | 1002 | | 255 | 236 | 296 |
| v/s Ratio Prot | 0.11 | c0.31 | | c0.13 | 0.24 | | c0.14 | 0.09 | | 0.08 | c0.18 | 0.05 |
| v/s Ratio Perm | | | 0.14 | | | | | | | | | 0.13 |
| v/c Ratio | 2.03 | 1.07 | 0.49 | 1.78 | 0.79 | | 0.45 | 0.30 | | 0.55 | 1.25 | 0.91 |
| Uniform Delay, d1 | 56.8 | 42.5 | 35.1 | 55.8 | 37.9 | | 33.4 | 31.6 | | 48.0 | 51.5 | 47.2 |
| Progression Factor | 0.94 | 0.76 | 1.25 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 480.4 | 47.9 | 3.3 | 380.6 | 4.2 | | 1.4 | 0.8 | | 1.5 | 142.6 | 30.1 |
| Delay (s) | 533.9 | 80.2 | 47.2 | 436.4 | 42.2 | | 34.7 | 32.4 | | 49.4 | 194.1 | 77.3 |
| Level of Service | F | F | D | F | D | | C | C | | D | F | E |
| Approach Delay (s) | | 158.3 | | | 103.8 | | | 33.6 | | | 120.5 | |
| Approach LOS | | F | | | F | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 114.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 99.4% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1520 | 268 | 0 | 1702 | 0 | 177 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 1652 | 291 | 0 | 1850 | 0 | 192 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.73 | | 0.73 | 0.73 |
| vC, conflicting volume | | | 1943 | | 2260 | 972 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 1556 | | 1989 | 227 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 66 |
| cM capacity (veh/h) | | | 315 | | 40 | 572 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 1101 | 842 | 462 | 462 | 462 | 462 | 192 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 291 | 0 | 0 | 0 | 0 | 192 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 572 |
| Volume to Capacity | 0.65 | 0.50 | 0.27 | 0.27 | 0.27 | 0.27 | 0.34 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.5 |
| Lane LOS | | | | | | | B |
| Approach Delay (s) | 0.0 | | 0.0 | | | | 14.5 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 68.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 460 | 1091 | 146 | 102 | 1157 | 234 | 283 | 16 | 40 | 269 | 12 | 234 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | *1.00 | *1.00 | | 1.00 | *1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.89 | | | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3800 | 3593 | | 1900 | 3689 | 1586 | 1900 | 1677 | | | 1805 | 1589 |
| Flt Permitted | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 0.44 | 1.00 | | | 0.69 | 1.00 |
| Satd. Flow (perm) | 3800 | 3593 | | 1900 | 3689 | 1586 | 835 | 1677 | | | 1310 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 484 | 1148 | 154 | 107 | 1218 | 246 | 298 | 17 | 42 | 283 | 13 | 246 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 0 | 154 | 0 | 28 | 0 | 0 | 0 | 164 |
| Lane Group Flow (vph) | 484 | 1292 | 0 | 107 | 1218 | 92 | 298 | 31 | 0 | 0 | 296 | 82 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 14.9 | 42.8 | | 11.2 | 39.1 | 39.1 | 35.1 | 35.1 | | | 35.1 | 35.1 |
| Effective Green, g (s) | 14.9 | 42.8 | | 11.2 | 39.1 | 39.1 | 35.1 | 35.1 | | | 35.1 | 35.1 |
| Actuated g/C Ratio | 0.14 | 0.41 | | 0.11 | 0.37 | 0.37 | 0.33 | 0.33 | | | 0.33 | 0.33 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 539 | 1464 | | 202 | 1373 | 590 | 279 | 560 | | | 437 | 531 |
| v/s Ratio Prot | c0.13 | c0.36 | | 0.06 | 0.33 | | | 0.02 | | | | |
| v/s Ratio Perm | | | | | | 0.06 | c0.36 | | | | 0.23 | 0.05 |
| v/c Ratio | 0.90 | 0.88 | | 0.53 | 0.89 | 0.16 | 1.07 | 0.06 | | | 0.68 | 0.15 |
| Uniform Delay, d1 | 44.3 | 28.8 | | 44.4 | 30.9 | 21.9 | 35.0 | 23.7 | | | 30.1 | 24.5 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 17.5 | 8.0 | | 2.5 | 8.8 | 0.6 | 73.1 | 0.0 | | | 4.1 | 0.1 |
| Delay (s) | 61.8 | 36.8 | | 46.9 | 39.7 | 22.5 | 108.0 | 23.7 | | | 34.2 | 24.7 |
| Level of Service | E | D | | D | D | C | F | C | | | C | C |
| Approach Delay (s) | | 43.6 | | | 37.5 | | | 94.1 | | | 29.9 | |
| Approach LOS | | D | | | D | | | F | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 43.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 81.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 338 | 152 | 108 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 367 | 165 | 117 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 591 | 224 | 283 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 591 | 224 | 283 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 473 | 821 | 1291 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 0 | 367 | 283 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 117 |
| cSH | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.22 | 0.17 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 21.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 289 | 6 | 6 | 49 | 62 | 90 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 314 | 7 | 7 | 53 | 67 | 98 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | None | |
| Median storage veh) | | | | 2 | | |
| Upstream signal (ft) | | | | | 753 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 183 | 116 | 165 | | | |
| vC1, stage 1 conf vol | 116 | | | | | |
| vC2, stage 2 conf vol | 66 | | | | | |
| vCu, unblocked vol | 183 | 116 | 165 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | 5.4 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 64 | 99 | 100 | | | |
| cM capacity (veh/h) | 868 | 941 | 1425 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 321 | 60 | 165 |
| Volume Left | 314 | 7 | 0 |
| Volume Right | 7 | 0 | 98 |
| cSH | 870 | 1425 | 1700 |
| Volume to Capacity | 0.37 | 0.00 | 0.10 |
| Queue Length 95th (ft) | 43 | 0 | 0 |
| Control Delay (s) | 11.5 | 0.9 | 0.0 |
| Lane LOS | B | A | |
| Approach Delay (s) | 11.5 | 0.9 | 0.0 |
| Approach LOS | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.9 | | |
| Intersection Capacity Utilization | 31.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 3 | 0 | 5 | 9 | 10 | 0 | 0 | 3 | 6 | 0 | 0 |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 3 | 4 | 0 | 7 | 12 | 13 | 0 | 0 | 4 | 8 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 7 | 32 | 4 | 8 |
| Volume Left (vph) | 3 | 7 | 0 | 8 |
| Volume Right (vph) | 0 | 13 | 4 | 0 |
| Hadj (s) | 0.08 | -0.21 | -0.60 | 0.20 |
| Departure Headway (s) | 4.0 | 3.7 | 3.4 | 4.2 |
| Degree Utilization, x | 0.01 | 0.03 | 0.00 | 0.01 |
| Capacity (veh/h) | 882 | 958 | 1047 | 848 |
| Control Delay (s) | 7.1 | 6.9 | 6.4 | 7.2 |
| Approach Delay (s) | 7.1 | 6.9 | 6.4 | 7.2 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 15.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.470
Loss Time (sec): 12 Average Delay (sec/veh): 20.5
Optimal Cycle: OPTIMIZED Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 42 | 3 | 3 | 16 | 0 | 40 | 23 | 1173 | 64 | 7 | 1174 | 18 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 42 | 3 | 3 | 16 | 0 | 40 | 23 | 1173 | 64 | 7 | 1174 | 18 |
| Added Vol: | 8 | 0 | 0 | 0 | 0 | 16 | 16 | 84 | 7 | 0 | 85 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 50 | 3 | 3 | 16 | 0 | 56 | 39 | 1257 | 71 | 7 | 1259 | 18 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 52 | 3 | 3 | 17 | 0 | 58 | 40 | 1300 | 73 | 7 | 1302 | 19 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 52 | 3 | 3 | 17 | 0 | 58 | 40 | 1300 | 73 | 7 | 1302 | 19 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 52 | 3 | 3 | 17 | 0 | 58 | 40 | 1300 | 73 | 7 | 1302 | 19 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.76 | 0.76 | 0.76 | 0.81 | 1.00 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.90 | 0.05 | 0.05 | 1.00 | 0.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1295 | 78 | 78 | 1543 | 0 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.01 | 0.00 | 0.04 | 0.02 | 0.36 | 0.05 | 0.00 | 0.36 | 0.01 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.24 | 0.24 | 0.24 | 0.00 | 0.24 | 0.08 | 0.53 | 0.53 | 0.12 | 0.58 | 0.58 |
| Volume/Cap: | 0.17 | 0.17 | 0.17 | 0.04 | 0.00 | 0.15 | 0.27 | 0.67 | 0.09 | 0.03 | 0.63 | 0.02 |
| Delay/Veh: | 36.2 | 36.2 | 36.2 | 34.9 | 0.0 | 36.0 | 52.5 | 21.3 | 13.7 | 46.3 | 17.6 | 11.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.2 | 36.2 | 36.2 | 34.9 | 0.0 | 36.0 | 52.5 | 21.3 | 13.7 | 46.3 | 17.6 | 11.0 |
| LOS by Move: | D | D | D | C | A | D | D | C | B | D | B | B |
| HCM2kAvgQ: | 2 | 2 | 2 | 0 | 0 | 2 | 2 | 19 | 1 | 0 | 17 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.363
Loss Time (sec): 12 Average Delay (sec/veh): 16.1
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Split Phase | | | | Split Phase | | | | Permitted | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 33 | 0 | 33 | | 0 | 0 | 0 | | 0 | 32 | 32 | | 10 | 10 | 0 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 1 | 0 | 2 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 141 | 0 | 13 | | 0 | 0 | 0 | | 0 | 1017 | 142 | | 20 | 983 | 0 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 141 | 0 | 13 | | 0 | 0 | 0 | | 0 | 1017 | 142 | | 20 | 983 | 0 | |
| Added Vol: | 20 | 0 | 0 | | 0 | 0 | 0 | | 0 | 65 | 20 | | 0 | 66 | 0 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 161 | 0 | 13 | | 0 | 0 | 0 | | 0 | 1082 | 162 | | 20 | 1049 | 0 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | |
| PHF Volume: | 170 | 0 | 14 | | 0 | 0 | 0 | | 0 | 1145 | 171 | | 21 | 1110 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 170 | 0 | 14 | | 0 | 0 | 0 | | 0 | 1145 | 171 | | 21 | 1110 | 0 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 170 | 0 | 14 | | 0 | 0 | 0 | | 0 | 1145 | 171 | | 21 | 1110 | 0 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | |
| Adjustment: | 0.95 | 1.00 | 0.85 | | 1.00 | 1.00 | 1.00 | | 1.00 | 0.91 | 0.85 | | 0.95 | 0.95 | 1.00 | |
| Lanes: | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 3.00 | 1.00 | | 1.00 | 2.00 | 0.00 | |
| Final Sat.: | 1805 | 0 | 1615 | | 0 | 0 | 0 | | 0 | 5187 | 1615 | | 1805 | 3610 | 0 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.00 | 0.01 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.22 | 0.11 | | 0.01 | 0.31 | 0.00 | |
| Crit Moves: | **** | | | | | | | | | **** | | | **** | | | |
| Green/Cycle: | 0.28 | 0.00 | 0.28 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.54 | 0.54 | | 0.08 | 0.63 | 0.00 | |
| Volume/Cap: | 0.34 | 0.00 | 0.03 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.41 | 0.20 | | 0.14 | 0.49 | 0.00 | |
| Delay/Veh: | 35.2 | 0.0 | 31.8 | | 0.0 | 0.0 | 0.0 | | 0.0 | 16.3 | 14.2 | | 51.4 | 12.4 | 0.0 | |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 35.2 | 0.0 | 31.8 | | 0.0 | 0.0 | 0.0 | | 0.0 | 16.3 | 14.2 | | 51.4 | 12.4 | 0.0 | |
| LOS by Move: | D | A | C | | A | A | A | | A | B | B | | D | B | A | |
| HCM2kAvgQ: | 5 | 0 | 0 | | 0 | 0 | 0 | | 0 | 9 | 3 | | 1 | 12 | 0 | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 120 | Critical Vol./Cap.(X): 0.369
Loss Time (sec): 12 | Average Delay (sec/veh): 13.6
Optimal Cycle: OPTIMIZED | Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 117 | 0 | 22 | 0 | 0 | 0 | 0 | 931 | 121 | 20 | 854 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 117 | 0 | 22 | 0 | 0 | 0 | 0 | 931 | 121 | 20 | 854 | 0 |
| Added Vol: | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 13 | 0 | 46 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 131 | 0 | 22 | 0 | 0 | 0 | 0 | 976 | 134 | 20 | 900 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 136 | 0 | 23 | 0 | 0 | 0 | 0 | 1017 | 140 | 21 | 938 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 136 | 0 | 23 | 0 | 0 | 0 | 0 | 1017 | 140 | 21 | 938 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 136 | 0 | 23 | 0 | 0 | 0 | 0 | 1017 | 140 | 21 | 938 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.92 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 2.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 3502 | 0 | 1615 | 0 | 0 | 0 | 0 | 3610 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.09 | 0.01 | 0.26 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.23 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.59 | 0.59 | 0.08 | 0.68 | 0.00 |
| Volume/Cap: | 0.17 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.15 | 0.14 | 0.38 | 0.00 |
| Delay/Veh: | 37.6 | 0.0 | 36.6 | 0.0 | 0.0 | 0.0 | 0.0 | 14.1 | 11.0 | 51.4 | 8.7 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.6 | 0.0 | 36.6 | 0.0 | 0.0 | 0.0 | 0.0 | 14.1 | 11.0 | 51.4 | 8.7 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | A | B | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 2 | 1 | 8 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.436 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 22.6 |
| Optimal Cycle: | OPTIMIZED | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 174 | 17 | 56 | 25 | 18 | 23 | 37 | 673 | 179 | 54 | 610 | 68 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 174 | 17 | 56 | 25 | 18 | 23 | 37 | 673 | 179 | 54 | 610 | 68 |
| Added Vol: | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 13 | 0 | 20 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 188 | 17 | 56 | 25 | 18 | 23 | 37 | 693 | 192 | 54 | 630 | 68 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 202 | 18 | 60 | 27 | 19 | 25 | 40 | 745 | 206 | 58 | 677 | 73 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 202 | 18 | 60 | 27 | 19 | 25 | 40 | 745 | 206 | 58 | 677 | 73 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 202 | 18 | 60 | 27 | 19 | 25 | 40 | 745 | 206 | 58 | 677 | 73 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.89 | 0.89 | 0.71 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.23 | 0.77 | 1.00 | 0.44 | 0.56 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1391 | 392 | 1290 | 1341 | 764 | 976 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.15 | 0.05 | 0.05 | 0.02 | 0.03 | 0.03 | 0.02 | 0.21 | 0.13 | 0.03 | 0.19 | 0.05 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.15 | 0.44 | 0.44 | 0.10 | 0.39 | 0.39 |
| Volume/Cap: | 0.43 | 0.14 | 0.14 | 0.06 | 0.07 | 0.07 | 0.14 | 0.47 | 0.29 | 0.32 | 0.49 | 0.12 |
| Delay/Veh: | 26.1 | 23.0 | 23.0 | 22.3 | 22.4 | 22.4 | 36.8 | 20.0 | 18.2 | 42.9 | 23.5 | 19.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.1 | 23.0 | 23.0 | 22.3 | 22.4 | 22.4 | 36.8 | 20.0 | 18.2 | 42.9 | 23.5 | 19.8 |
| LOS by Move: | C | C | C | C | C | C | D | B | B | D | C | B |
| HCM2kAvgQ: | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 9 | 4 | 2 | 8 | 1 |

Note: Queue reported is the number of cars per lane.

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# APPENDIX 6.3

Opening Year (2016) Without Project Conditions
Traffic Signal Warrant Analysis Worksheets

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/02/15

CHK IA DATE 04/02/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Main Street**

Minor Street: **W. Graham Avenue**

Critical Approach Speed (Major) 30 mph

Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **7,701** vpd

Minor Street Future ADT = **3,482** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **7,701** | *1* **3,482** | 8,000 | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **7,701** | *1* **3,482** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 96% / **B** 64% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2016 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/02/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/02/15 |
| Major Street: | **Riverside Drive (SR-74)** | | | | Critical Approach Speed (Major) | | 40 mph |
| Minor Street: | **Gunnerson Street** | | | | Critical Approach Speed (Minor) | | 30 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **26,458** vpd  Minor Street Future ADT = **955** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [ ]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **26,458** | *1* **955** | 8,000 * | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **26,458** | *1* **955** | 12,000 * | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 40% / **B** 80% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/02/15

CHK IA DATE 04/02/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Nichols Road**

Minor Street: **I-15 SB Ramps**

Critical Approach Speed (Major) 35 mph

Critical Approach Speed (Minor) 45 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **10,821** vpd

Minor Street Future ADT = **1,950** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **10,821** | *1* **1,950** | 8,000 * | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **10,821** | *1* **1,950** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 81% | **B** 90% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Nichols Road**

Minor Street: **I-15 NB Ramps**

Critical Approach Speed (Major) 35 mph

Critical Approach Speed (Minor) 45 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **6,021** vpd

Minor Street Future ADT = **1,938** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,021** | *1* **1,938** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,021** | *1* **1,938** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 75% / **B** 50% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/02/15

CHK IA DATE 04/02/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Main Street**

Minor Street: **I-15 NB Ramps**

Critical Approach Speed (Major) 30 mph

Critical Approach Speed (Minor) 45 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **8,195** vpd

Minor Street Future ADT = **2,600** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,195** | *1* **2,600** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,195** | *1* **2,600** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% / **B** 68% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Dexter Avenue**

Minor Street: **11th Street**

Critical Approach Speed (Major) 45 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **2,036** vpd

Minor Street Future ADT = **497** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  √

or

In built up area of isolated community of < 10,000 population ……  

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,036** | *1* **497** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,036** | *1* **497** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 30% / **B** 24% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2016 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/02/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/02/15 |
| Major Street: | **Dexter Avenue** | | | | Critical Approach Speed (Major) | | 45 mph |
| Minor Street: | **Crane Street** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **8,000** vpd  Minor Street Future ADT = **950** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [√]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,000** | *1* **950** | 8,000 * | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,000** | *1* **950** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 40% / **B** 67% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2016 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/06/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/16/15 |
| Major Street: | **Dexter Avenue** | | | | Critical Approach Speed (Major) | | 45 mph |
| Minor Street: | **3rd Street** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **5,424** vpd  Minor Street Future ADT = **155** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [√]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **5,424** | *1* **155** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **5,424** | *1* **155** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** / **B** | | | | |
| | **9%** / **18%** | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Dexter Avenue**

Minor Street: **2nd Street**

Critical Approach Speed (Major) 45 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **8,023** vpd

Minor Street Future ADT = **2,674** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  √

or

In built up area of isolated community of < 10,000 population ……  

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,023** | *1* **2,674** | 8,000 | 5,600 * | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,023** | *1* **2,674** | 12,000 | 8,400 | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 96% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Camino del Norte**

Minor Street: **N. Main Street**

Critical Approach Speed (Major) 55 mph

Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **2,895** vpd

Minor Street Future ADT = **3,545** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  √

or

In built up area of isolated community of < 10,000 population ……  

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,895** | *1* **3,545** | 8,000 | 5,600 | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,895** | *1* **3,545** | 12,000 | 8,400 | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 52% / **B** 34% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2016 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/06/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/06/15 |
| Major Street: | **3rd Street** | | | | Critical Approach Speed (Major) | | 25 mph |
| Minor Street: | **Cambern Avenue** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **269** vpd  Minor Street Future ADT = **78** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [ ]

or  **URBAN (U)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **269** | *1* **78** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **269** | *1* **78** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 3% / **B** 2% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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# APPENDIX 6.4

Opening Year (2016) With Project Conditions
Traffic Signal Warrant Analysis Worksheets

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Main Street** Critical Approach Speed (Major) 30 mph

Minor Street: **W. Graham Avenue** Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **8,290** vpd Minor Street Future ADT = **3,599** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or **URBAN (U)**

In built up area of isolated community of < 10,000 population ……

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,290** | *1* **3,599** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **8,290** | *1* **3,599** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% / **B** 69% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Riverside Drive (SR-74)** Critical Approach Speed (Major) 40 mph

Minor Street: **Gunnerson Street** Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **27,982** vpd Minor Street Future ADT = **1,131** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **27,982** | *1* **1,131** | 8,000 * | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **27,982** | *1* **1,131** | 12,000 * | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 47% / **B** 94% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Nichols Road**

Minor Street: **I-15 NB Ramps**

Critical Approach Speed (Major) 35 mph

Critical Approach Speed (Minor) 45 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **6,197** vpd

Minor Street Future ADT = **2,056** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,197** | *1* **2,056** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,197** | *1* **2,056** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 77% / **B** 52% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Dexter Avenue**

Minor Street: **11th Street**

Critical Approach Speed (Major) 45 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **2,446** vpd

Minor Street Future ADT = **673** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  √

or

In built up area of isolated community of < 10,000 population ……  

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | | | | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,446** | *1* **673** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | | | | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,446** | *1* **673** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | | | | |
| | XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 40% / **B** 29% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2016 WP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/02/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/02/15 |
| Major Street: | **Dexter Avenue** | | | | Critical Approach Speed (Major) | | 45 mph |
| Minor Street: | **Crane Street** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **12,788** vpd  Minor Street Future ADT = **2,504** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [√]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **12,788** | *1* **2,504** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **12,788** | *1* **2,504** | 12,000 * | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Dexter Avenue**

Minor Street: **3rd Street**

Critical Approach Speed (Major) 45 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **6,362** vpd

Minor Street Future ADT = **155** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..... [√]

or

In built up area of isolated community of < 10,000 population …… [ ]

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,362** | *1* **155** | 8,000 | 5,600 * | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **6,362** | *1* **155** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 9% / **B** 18% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Camino del Norte**

Minor Street: **N. Main Street**

Critical Approach Speed (Major) 55 mph

Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **3,365** vpd

Minor Street Future ADT = **4,015** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  √

or

In built up area of isolated community of < 10,000 population ……  

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **3,365** | *1* **4,015** | 8,000 | 5,600 | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **3,365** | *1* **4,015** | 12,000 | 8,400 | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 60% / **B** 40% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Cambern Avenue**

Minor Street: **Driveway 3**

Critical Approach Speed (Major) 25 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **2,115** vpd

Minor Street Future ADT = **1,906** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,115** | *1* **1,906** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied XX | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **2,115** | *1* **1,906** | 12,000 | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied XX | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 26% / **B** 18% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2016 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **3rd Street**

Minor Street: **Cambern Avenue**

Critical Approach Speed (Major) 25 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **328** vpd

Minor Street Future ADT = **137** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **328** | *1* **137** | 8,000 | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **328** | *1* **137** | 12,000 | 8,400 | 1,200 | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| | XX | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 4% / **B** 3% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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# APPENDIX 6.5

Opening Year (2016) Without Project Conditions
Ramp Queuing Analysis Worksheets

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 99 | 368 | 0 | 0 | 147 | 108 | 116 | 0 | 134 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 141 | 526 | 0 | 0 | 210 | 154 | 166 | 0 | 191 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 364 | | | 526 | | | 1096 | 1173 | 526 | 1287 | 1096 | 287 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 364 | | | 526 | | | 1096 | 1173 | 526 | 1287 | 1096 | 287 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 3 | 100 | 66 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1162 | | | 1051 | | | 172 | 170 | 556 | 85 | 189 | 757 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 141 | 526 | 364 | 357 |
| Volume Left | 141 | 0 | 0 | 166 |
| Volume Right | 0 | 0 | 154 | 191 |
| cSH | 1162 | 1700 | 1700 | 273 |
| Volume to Capacity | 0.12 | 0.31 | 0.21 | 1.31 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 450 |
| Control Delay (s) | 8.5 | 0.0 | 0.0 | 200.5 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 1.8 | | 0.0 | 200.5 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 52.4 | | |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 756 | 575 | 704 | 1362 | 197 | 196 | 179 |
| v/c Ratio | 0.49 | 0.58 | 0.88 | 0.53 | 0.78 | 0.66 | 0.60 |
| Control Delay | 23.5 | 6.0 | 54.2 | 7.9 | 63.8 | 36.7 | 32.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| Total Delay | 23.5 | 6.0 | 54.2 | 8.7 | 63.8 | 36.7 | 32.1 |
| Queue Length 50th (ft) | 200 | 24 | 241 | 191 | 141 | 90 | 71 |
| Queue Length 95th (ft) | 268 | 111 | #349 | 291 | 210 | 162 | 136 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1549 | 988 | 817 | 2573 | 343 | 379 | 379 |
| Starvation Cap Reductn | 0 | 0 | 0 | 815 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.49 | 0.58 | 0.86 | 0.77 | 0.57 | 0.52 | 0.47 |

Intersection Summary

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

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 120 | 994 | 1534 | 535 | 401 | 383 | 371 |
| v/c Ratio | 0.61 | 0.33 | 0.69 | 0.56 | 0.91 | 0.84 | 0.77 |
| Control Delay | 49.8 | 8.9 | 23.3 | 4.4 | 58.1 | 41.3 | 32.3 |
| Queue Delay | 0.0 | 0.0 | 9.1 | 0.6 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.8 | 8.9 | 32.4 | 5.0 | 58.1 | 41.3 | 32.3 |
| Queue Length 50th (ft) | 66 | 94 | 256 | 0 | 227 | 173 | 135 |
| Queue Length 95th (ft) | 112 | 115 | 332 | 58 | #381 | #321 | #242 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 361 | 2992 | 2208 | 953 | 466 | 478 | 498 |
| Starvation Cap Reductn | 0 | 0 | 652 | 150 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.33 | 0.33 | 0.99 | 0.67 | 0.86 | 0.80 | 0.74 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 209 | 272 | 65 | 464 | 0 | 0 | 0 | 0 | 7 | 0 | 70 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 0 | 252 | 328 | 78 | 559 | 0 | 0 | 0 | 0 | 8 | 0 | 84 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 559 | | | 580 | | | 1010 | 967 | 252 | 967 | 1295 | 559 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 559 | | | 580 | | | 1010 | 967 | 252 | 967 | 1295 | 559 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 95 | 100 | 84 |
| cM capacity (veh/h) | 1022 | | | 965 | | | 174 | 235 | 792 | 180 | 150 | 532 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 252 | 328 | 78 | 559 | 93 |
| Volume Left | 0 | 0 | 78 | 0 | 8 |
| Volume Right | 0 | 328 | 0 | 0 | 84 |
| cSH | 1700 | 1700 | 965 | 1700 | 586 |
| Volume to Capacity | 0.15 | 0.19 | 0.08 | 0.33 | 0.16 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 14 |
| Control Delay (s) | 0.0 | 0.0 | 9.1 | 0.0 | 14.2 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.1 | | 14.2 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 51.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 113 | 103 | 0 | 0 | 173 | 4 | 356 | 0 | 102 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 136 | 124 | 0 | 0 | 208 | 5 | 429 | 0 | 123 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 213 | | | 124 | | | 607 | 610 | 124 | 730 | 607 | 211 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 213 | | | 124 | | | 607 | 610 | 124 | 730 | 607 | 211 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 0 | 100 | 87 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1339 | | | 1475 | | | 375 | 370 | 932 | 272 | 371 | 834 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 136 | 124 | 213 | 552 |
| Volume Left | 136 | 0 | 0 | 429 |
| Volume Right | 0 | 0 | 5 | 123 |
| cSH | 1339 | 1700 | 1700 | 433 |
| Volume to Capacity | 0.10 | 0.07 | 0.13 | 1.28 |
| Queue Length 95th (ft) | 8 | 0 | 0 | 591 |
| Control Delay (s) | 8.0 | 0.0 | 0.0 | 168.0 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 4.2 | | 0.0 | 168.0 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 91.5 | | |
| Intersection Capacity Utilization | 51.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 629 | 255 | 765 | 791 | 711 | 198 | 195 |
| v/c Ratio | 0.63 | 0.41 | 1.14 | 0.32 | 1.04 | 0.45 | 0.44 |
| Control Delay | 40.3 | 6.0 | 108.7 | 8.0 | 90.7 | 9.2 | 8.9 |
| Queue Delay | 1.2 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.5 | 6.1 | 109.0 | 8.0 | 90.7 | 9.2 | 8.9 |
| Queue Length 50th (ft) | 222 | 0 | ~591 | 121 | ~305 | 1 | 0 |
| Queue Length 95th (ft) | 254 | 42 | m#481 | m122 | #362 | 48 | 46 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1003 | 626 | 669 | 2473 | 686 | 443 | 441 |
| Starvation Cap Reductn | 178 | 44 | 33 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.76 | 0.44 | 1.20 | 0.32 | 1.04 | 0.45 | 0.44 |

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.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 291 | 958 | 1910 | 871 | 226 | 428 |
| v/c Ratio | 0.69 | 0.25 | 0.97 | 0.77 | 0.89 | 0.59 |
| Control Delay | 103.7 | 6.3 | 26.5 | 14.3 | 83.6 | 12.3 |
| Queue Delay | 0.0 | 0.0 | 44.1 | 50.8 | 0.0 | 0.7 |
| Total Delay | 103.7 | 6.3 | 70.6 | 65.1 | 83.6 | 12.9 |
| Queue Length 50th (ft) | 124 | 90 | 841 | 563 | 172 | 26 |
| Queue Length 95th (ft) | 165 | m92 | m671 | m440 | #295 | 73 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 423 | 3775 | 1973 | 1128 | 270 | 753 |
| Starvation Cap Reductn | 0 | 0 | 899 | 439 | 0 | 0 |
| Spillback Cap Reductn | 0 | 296 | 157 | 0 | 0 | 106 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.69 | 0.28 | 1.78 | 1.26 | 0.84 | 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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 186 | 140 | 0 | 0 | 119 | 26 | 254 | 0 | 28 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 221 | 167 | 0 | 0 | 142 | 31 | 302 | 0 | 33 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 173 | | | 167 | | | 767 | 782 | 167 | 800 | 767 | 157 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 173 | | | 167 | | | 767 | 782 | 167 | 800 | 767 | 157 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 84 | | | 100 | | | 0 | 100 | 96 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1392 | | | 1424 | | | 280 | 276 | 883 | 258 | 282 | 894 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 221 | 167 | 173 | 336 |
| Volume Left | 221 | 0 | 0 | 302 |
| Volume Right | 0 | 0 | 31 | 33 |
| cSH | 1392 | 1700 | 1700 | 301 |
| Volume to Capacity | 0.16 | 0.10 | 0.10 | 1.12 |
| Queue Length 95th (ft) | 14 | 0 | 0 | 341 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 125.2 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 4.6 | | 0.0 | 125.2 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 48.9 | | |
| Intersection Capacity Utilization | 45.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1285 | 583 | 677 | 1368 | 331 | 327 | 188 |
| v/c Ratio | 0.85 | 0.59 | 0.89 | 0.56 | 0.92 | 0.82 | 0.50 |
| Control Delay | 35.5 | 6.2 | 57.1 | 10.1 | 73.9 | 49.3 | 27.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 |
| Total Delay | 35.5 | 6.2 | 57.1 | 11.2 | 73.9 | 49.3 | 27.4 |
| Queue Length 50th (ft) | 437 | 28 | 237 | 240 | 238 | 190 | 72 |
| Queue Length 95th (ft) | #552 | 120 | #326 | 295 | #408 | #341 | 147 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1520 | 985 | 800 | 2451 | 377 | 415 | 394 |
| Starvation Cap Reductn | 0 | 0 | 0 | 771 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.85 | 0.59 | 0.85 | 0.81 | 0.88 | 0.79 | 0.48 |

Intersection Summary

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

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 164 | 1719 | 1358 | 408 | 470 | 447 | 428 |
| v/c Ratio | 0.66 | 0.56 | 0.65 | 0.47 | 1.01 | 0.93 | 0.90 |
| Control Delay | 49.0 | 11.6 | 23.8 | 4.3 | 78.4 | 54.8 | 49.1 |
| Queue Delay | 0.0 | 0.3 | 4.9 | 0.5 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 11.9 | 28.6 | 4.8 | 78.4 | 54.8 | 49.1 |
| Queue Length 50th (ft) | 90 | 196 | 221 | 0 | ~285 | 225 | 201 |
| Queue Length 95th (ft) | 144 | 235 | 300 | 60 | #494 | #432 | #389 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 393 | 3067 | 2104 | 859 | 466 | 479 | 476 |
| Starvation Cap Reductn | 0 | 658 | 667 | 160 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.71 | 0.95 | 0.58 | 1.01 | 0.93 | 0.90 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 281 | 263 | 72 | 406 | 0 | 0 | 0 | 0 | 13 | 0 | 225 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 312 | 292 | 80 | 451 | 0 | 0 | 0 | 0 | 14 | 0 | 250 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 451 | | | 604 | | | 1048 | 923 | 312 | 923 | 1216 | 451 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 451 | | | 604 | | | 1048 | 923 | 312 | 923 | 1216 | 451 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 94 | 100 | 59 |
| cM capacity (veh/h) | 1120 | | | 973 | | | 114 | 249 | 733 | 223 | 168 | 604 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 312 | 292 | 80 | 451 | 264 |
| Volume Left | 0 | 0 | 80 | 0 | 14 |
| Volume Right | 0 | 292 | 0 | 0 | 250 |
| cSH | 1700 | 1700 | 973 | 1700 | 639 |
| Volume to Capacity | 0.18 | 0.17 | 0.08 | 0.27 | 0.41 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 51 |
| Control Delay (s) | 0.0 | 0.0 | 9.0 | 0.0 | 15.5 |
| Lane LOS | | | A | | C |
| Approach Delay (s) | 0.0 | | 1.4 | | 15.5 |
| Approach LOS | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 53.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 133 | 161 | 0 | 0 | 187 | 32 | 292 | 0 | 130 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 151 | 183 | 0 | 0 | 212 | 36 | 332 | 0 | 148 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 249 | | | 183 | | | 716 | 734 | 183 | 864 | 716 | 231 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 249 | | | 183 | | | 716 | 734 | 183 | 864 | 716 | 231 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 0 | 100 | 83 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1299 | | | 1404 | | | 313 | 309 | 865 | 209 | 317 | 814 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 151 | 183 | 249 | 480 |
| Volume Left | 151 | 0 | 0 | 332 |
| Volume Right | 0 | 0 | 36 | 148 |
| cSH | 1299 | 1700 | 1700 | 390 |
| Volume to Capacity | 0.12 | 0.11 | 0.15 | 1.23 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 503 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 154.2 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 3.7 | | 0.0 | 154.2 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 70.7 | | |
| Intersection Capacity Utilization | 53.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 767 | 200 | 465 | 810 | 1095 | 209 | 210 |
| v/c Ratio | 0.76 | 0.33 | 0.70 | 0.32 | 1.54 | 0.45 | 0.45 |
| Control Delay | 44.5 | 6.0 | 25.9 | 4.8 | 281.9 | 9.5 | 8.6 |
| Queue Delay | 4.5 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 6.0 | 26.3 | 4.8 | 281.9 | 9.5 | 8.6 |
| Queue Length 50th (ft) | 284 | 0 | 116 | 61 | ~613 | 4 | 0 |
| Queue Length 95th (ft) | 358 | 55 | 189 | m94 | #745 | 73 | 68 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1013 | 604 | 669 | 2522 | 713 | 466 | 470 |
| Starvation Cap Reductn | 177 | 0 | 31 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.92 | 0.33 | 0.73 | 0.32 | 1.54 | 0.45 | 0.45 |

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.

## 15: I-15 NB Off Ramp/I-15 NB On Ramp & Railroad Canyon Rd.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 323 | 1480 | 1220 | 545 | 299 | 691 |
| v/c Ratio | 0.76 | 0.39 | 0.63 | 0.51 | 1.04 | 1.20 |
| Control Delay | 103.1 | 6.5 | 15.5 | 6.4 | 112.3 | 139.8 |
| Queue Delay | 0.0 | 0.3 | 49.8 | 4.1 | 0.0 | 1.3 |
| Total Delay | 103.1 | 6.7 | 65.3 | 10.5 | 112.3 | 141.1 |
| Queue Length 50th (ft) | 138 | 128 | 333 | 170 | ~249 | ~315 |
| Queue Length 95th (ft) | m180 | m91 | m378 | m230 | #428 | #450 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 423 | 3839 | 1940 | 1073 | 288 | 577 |
| Starvation Cap Reductn | 0 | 1447 | 938 | 434 | 0 | 0 |
| Spillback Cap Reductn | 0 | 412 | 0 | 0 | 0 | 87 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.76 | 0.62 | 1.22 | 0.85 | 1.04 | 1.41 |

### 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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 205 | 113 | 0 | 0 | 109 | 19 | 239 | 0 | 16 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 209 | 115 | 0 | 0 | 111 | 19 | 244 | 0 | 16 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 131 | | | 115 | | | 655 | 664 | 115 | 671 | 655 | 121 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 131 | | | 115 | | | 655 | 664 | 115 | 671 | 655 | 121 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 86 | | | 100 | | | 28 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1467 | | | 1486 | | | 341 | 329 | 943 | 326 | 333 | 936 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 209 | 115 | 131 | 260 |
| Volume Left | 209 | 0 | 0 | 244 |
| Volume Right | 0 | 0 | 19 | 16 |
| cSH | 1467 | 1700 | 1700 | 355 |
| Volume to Capacity | 0.14 | 0.07 | 0.08 | 0.73 |
| Queue Length 95th (ft) | 12 | 0 | 0 | 140 |
| Control Delay (s) | 7.9 | 0.0 | 0.0 | 38.5 |
| Lane LOS | A | | | E |
| Approach Delay (s) | 5.1 | | 0.0 | 38.5 |
| Approach LOS | | | | E |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 16.3 | | |
| Intersection Capacity Utilization | 44.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 966 | 577 | 613 | 1309 | 238 | 237 | 213 |
| v/c Ratio | 0.58 | 0.56 | 0.85 | 0.51 | 0.80 | 0.70 | 0.64 |
| Control Delay | 24.3 | 5.5 | 54.1 | 8.1 | 62.4 | 39.8 | 33.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| Total Delay | 24.3 | 5.5 | 54.1 | 8.8 | 62.4 | 39.8 | 33.6 |
| Queue Length 50th (ft) | 258 | 20 | 214 | 188 | 170 | 120 | 89 |
| Queue Length 95th (ft) | 363 | 112 | 275 | 275 | 251 | 206 | 166 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1668 | 1023 | 796 | 2581 | 377 | 411 | 398 |
| Starvation Cap Reductn | 0 | 0 | 0 | 859 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.58 | 0.56 | 0.77 | 0.76 | 0.63 | 0.58 | 0.54 |

Intersection Summary

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 113 | 1271 | 1391 | 435 | 426 | 404 | 394 |
| v/c Ratio | 0.56 | 0.41 | 0.58 | 0.45 | 0.95 | 0.87 | 0.84 |
| Control Delay | 48.1 | 9.8 | 20.0 | 3.6 | 65.0 | 44.9 | 41.2 |
| Queue Delay | 0.0 | 0.0 | 1.7 | 0.5 | 0.0 | 0.0 | 0.0 |
| Total Delay | 48.1 | 9.8 | 21.7 | 4.1 | 65.0 | 44.9 | 41.2 |
| Queue Length 50th (ft) | 62 | 127 | 215 | 0 | 248 | 191 | 174 |
| Queue Length 95th (ft) | 110 | 157 | 287 | 57 | #438 | #373 | #341 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 409 | 3086 | 2402 | 958 | 456 | 471 | 476 |
| Starvation Cap Reductn | 0 | 0 | 787 | 207 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.28 | 0.41 | 0.86 | 0.58 | 0.93 | 0.86 | 0.83 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 241 | 153 | 68 | 241 | 0 | 0 | 0 | 0 | 28 | 0 | 123 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 251 | 159 | 71 | 251 | 0 | 0 | 0 | 0 | 29 | 0 | 128 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 251 | | | 410 | | | 708 | 644 | 251 | 644 | 803 | 251 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 251 | | | 410 | | | 708 | 644 | 251 | 644 | 803 | 251 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 94 | | | 100 | 100 | 100 | 92 | 100 | 84 |
| cM capacity (veh/h) | 1326 | | | 1138 | | | 281 | 370 | 793 | 370 | 299 | 785 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 251 | 159 | 71 | 251 | 157 |
| Volume Left | 0 | 0 | 71 | 0 | 29 |
| Volume Right | 0 | 159 | 0 | 0 | 128 |
| cSH | 1700 | 1700 | 1138 | 1700 | 964 |
| Volume to Capacity | 0.15 | 0.09 | 0.06 | 0.15 | 0.16 |
| Queue Length 95th (ft) | 0 | 0 | 5 | 0 | 15 |
| Control Delay (s) | 0.0 | 0.0 | 8.4 | 0.0 | 11.4 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.8 | | 11.4 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.7 | | |
| Intersection Capacity Utilization | 39.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 130 | 139 | 0 | 0 | 142 | 2 | 168 | 0 | 92 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 140 | 149 | 0 | 0 | 153 | 2 | 181 | 0 | 99 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 155 | | | 149 | | | 583 | 584 | 149 | 682 | 583 | 154 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 155 | | | 149 | | | 583 | 584 | 149 | 682 | 583 | 154 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 54 | 100 | 89 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1425 | | | 1444 | | | 391 | 384 | 900 | 302 | 385 | 897 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 140 | 149 | 155 | 280 |
| Volume Left | 140 | 0 | 0 | 181 |
| Volume Right | 0 | 0 | 2 | 99 |
| cSH | 1425 | 1700 | 1700 | 488 |
| Volume to Capacity | 0.10 | 0.09 | 0.09 | 0.57 |
| Queue Length 95th (ft) | 8 | 0 | 0 | 88 |
| Control Delay (s) | 7.8 | 0.0 | 0.0 | 21.8 |
| Lane LOS | A | | | C |
| Approach Delay (s) | 3.8 | | 0.0 | 21.8 |
| Approach LOS | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 9.9 | | |
| Intersection Capacity Utilization | 39.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 907 | 245 | 422 | 778 | 953 | 197 | 195 |
| v/c Ratio | 0.88 | 0.39 | 0.63 | 0.31 | 1.34 | 0.43 | 0.42 |
| Control Delay | 51.6 | 6.5 | 26.7 | 6.9 | 198.9 | 8.8 | 8.5 |
| Queue Delay | 35.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 86.7 | 6.5 | 27.0 | 6.9 | 198.9 | 8.8 | 8.5 |
| Queue Length 50th (ft) | 352 | 4 | 119 | 89 | ~495 | 1 | 0 |
| Queue Length 95th (ft) | #461 | 65 | 208 | 146 | #624 | 67 | 65 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1033 | 626 | 669 | 2522 | 713 | 462 | 461 |
| Starvation Cap Reductn | 184 | 0 | 40 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.07 | 0.39 | 0.67 | 0.31 | 1.34 | 0.43 | 0.42 |

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.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 342 | 1518 | 1357 | 606 | 174 | 449 |
| v/c Ratio | 0.77 | 0.39 | 0.68 | 0.54 | 0.67 | 0.87 |
| Control Delay | 99.1 | 6.7 | 15.5 | 6.4 | 61.4 | 53.3 |
| Queue Delay | 0.0 | 0.3 | 49.1 | 3.5 | 0.0 | 7.5 |
| Total Delay | 99.1 | 7.0 | 64.5 | 9.8 | 61.4 | 60.8 |
| Queue Length 50th (ft) | 146 | 173 | 394 | 201 | 127 | 139 |
| Queue Length 95th (ft) | m167 | m147 | m474 | m269 | 203 | #210 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 444 | 3937 | 2002 | 1115 | 294 | 568 |
| Starvation Cap Reductn | 0 | 1447 | 837 | 402 | 0 | 0 |
| Spillback Cap Reductn | 0 | 359 | 0 | 0 | 0 | 85 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.61 | 1.16 | 0.85 | 0.59 | 0.93 |

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.

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# APPENDIX 6.6

Opening Year (2016) With Project Conditions
Ramp Queuing Analysis Worksheets

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 99 | 368 | 0 | 0 | 150 | 108 | 124 | 0 | 137 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 141 | 526 | 0 | 0 | 214 | 154 | 177 | 0 | 196 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 369 | | | 526 | | | 1100 | 1177 | 526 | 1296 | 1100 | 291 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 369 | | | 526 | | | 1100 | 1177 | 526 | 1296 | 1100 | 291 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 0 | 100 | 65 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1158 | | | 1051 | | | 170 | 169 | 556 | 83 | 188 | 753 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 141 | 526 | 369 | 373 |
| Volume Left | 141 | 0 | 0 | 177 |
| Volume Right | 0 | 0 | 154 | 196 |
| cSH | 1158 | 1700 | 1700 | 268 |
| Volume to Capacity | 0.12 | 0.31 | 0.22 | 1.39 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 502 |
| Control Delay (s) | 8.5 | 0.0 | 0.0 | 233.9 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 1.8 | | 0.0 | 233.9 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 62.8 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 847 | 575 | 773 | 1430 | 223 | 223 | 202 |
| v/c Ratio | 0.59 | 0.60 | 0.90 | 0.57 | 0.81 | 0.70 | 0.64 |
| Control Delay | 27.0 | 6.4 | 54.8 | 9.0 | 65.2 | 39.5 | 35.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 27.0 | 6.4 | 54.8 | 10.0 | 65.2 | 39.5 | 35.3 |
| Queue Length 50th (ft) | 246 | 26 | 266 | 223 | 160 | 109 | 88 |
| Queue Length 95th (ft) | 307 | 113 | #404 | 315 | 237 | 192 | 162 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1440 | 953 | 860 | 2524 | 343 | 382 | 377 |
| Starvation Cap Reductn | 0 | 0 | 0 | 765 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.59 | 0.60 | 0.90 | 0.81 | 0.65 | 0.58 | 0.54 |

Intersection Summary

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

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 120 | 1164 | 1674 | 593 | 434 | 413 | 400 |
| v/c Ratio | 0.61 | 0.40 | 0.78 | 0.61 | 0.95 | 0.89 | 0.86 |
| Control Delay | 49.8 | 9.7 | 25.9 | 4.8 | 64.2 | 47.3 | 43.6 |
| Queue Delay | 0.0 | 0.0 | 44.1 | 0.7 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.8 | 9.7 | 70.0 | 5.5 | 64.2 | 47.3 | 43.6 |
| Queue Length 50th (ft) | 66 | 115 | 291 | 0 | 252 | 197 | 180 |
| Queue Length 95th (ft) | 112 | 139 | 376 | 59 | #427 | #369 | #335 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 361 | 2943 | 2158 | 977 | 466 | 472 | 472 |
| Starvation Cap Reductn | 0 | 0 | 624 | 140 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.33 | 0.40 | 1.09 | 0.71 | 0.93 | 0.88 | 0.85 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 236 | 272 | 65 | 485 | 0 | 0 | 0 | 0 | 7 | 0 | 70 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 0 | 284 | 328 | 78 | 584 | 0 | 0 | 0 | 0 | 8 | 0 | 84 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 584 | | | 612 | | | 1067 | 1025 | 284 | 1025 | 1353 | 584 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 584 | | | 612 | | | 1067 | 1025 | 284 | 1025 | 1353 | 584 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 95 | 100 | 84 |
| cM capacity (veh/h) | 1000 | | | 939 | | | 158 | 217 | 759 | 163 | 139 | 515 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 284 | 328 | 78 | 584 | 93 |
| Volume Left | 0 | 0 | 78 | 0 | 8 |
| Volume Right | 0 | 328 | 0 | 0 | 84 |
| cSH | 1700 | 1700 | 939 | 1700 | 567 |
| Volume to Capacity | 0.17 | 0.19 | 0.08 | 0.34 | 0.16 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 15 |
| Control Delay (s) | 0.0 | 0.0 | 9.2 | 0.0 | 14.7 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.1 | | 14.7 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 52.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 113 | 130 | 0 | 0 | 194 | 4 | 356 | 0 | 102 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 136 | 157 | 0 | 0 | 234 | 5 | 429 | 0 | 123 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 239 | | | 157 | | | 665 | 667 | 157 | 788 | 665 | 236 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 239 | | | 157 | | | 665 | 667 | 157 | 788 | 665 | 236 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 0 | 100 | 86 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1311 | | | 1436 | | | 343 | 342 | 894 | 247 | 343 | 808 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 136 | 157 | 239 | 552 |
| Volume Left | 136 | 0 | 0 | 429 |
| Volume Right | 0 | 0 | 5 | 123 |
| cSH | 1311 | 1700 | 1700 | 397 |
| Volume to Capacity | 0.10 | 0.09 | 0.14 | 1.39 |
| Queue Length 95th (ft) | 9 | 0 | 0 | 675 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 217.3 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 3.8 | | 0.0 | 217.3 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 111.7 | | |
| Intersection Capacity Utilization | 52.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 650 | 255 | 765 | 791 | 733 | 206 | 203 |
| v/c Ratio | 0.65 | 0.41 | 1.14 | 0.32 | 1.07 | 0.46 | 0.45 |
| Control Delay | 40.9 | 6.0 | 108.6 | 8.0 | 99.6 | 9.2 | 9.0 |
| Queue Delay | 1.4 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.3 | 6.1 | 109.0 | 8.0 | 99.6 | 9.2 | 9.0 |
| Queue Length 50th (ft) | 231 | 0 | ~591 | 122 | ~323 | 1 | 0 |
| Queue Length 95th (ft) | 264 | 42 | m#455 | m121 | #380 | 48 | 46 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1003 | 626 | 669 | 2473 | 686 | 449 | 447 |
| Starvation Cap Reductn | 177 | 44 | 34 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.79 | 0.44 | 1.20 | 0.32 | 1.07 | 0.46 | 0.45 |

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.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 310 | 978 | 1938 | 870 | 226 | 428 |
| v/c Ratio | 0.73 | 0.26 | 0.98 | 0.77 | 0.89 | 0.60 |
| Control Delay | 104.9 | 6.1 | 27.7 | 14.2 | 83.6 | 13.6 |
| Queue Delay | 0.0 | 0.0 | 42.4 | 50.8 | 0.0 | 0.7 |
| Total Delay | 104.9 | 6.1 | 70.0 | 65.0 | 83.6 | 14.3 |
| Queue Length 50th (ft) | 132 | 91 | 853 | 562 | 172 | 31 |
| Queue Length 95th (ft) | 175 | m91 | m678 | m427 | #295 | 79 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 423 | 3775 | 1975 | 1127 | 270 | 742 |
| Starvation Cap Reductn | 0 | 0 | 886 | 438 | 0 | 0 |
| Spillback Cap Reductn | 0 | 295 | 159 | 0 | 0 | 105 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.73 | 0.28 | 1.78 | 1.26 | 0.84 | 0.67 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 186 | 140 | 0 | 0 | 123 | 26 | 267 | 0 | 32 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 221 | 167 | 0 | 0 | 146 | 31 | 318 | 0 | 38 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 177 | | | 167 | | | 771 | 787 | 167 | 810 | 771 | 162 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 177 | | | 167 | | | 771 | 787 | 167 | 810 | 771 | 162 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 84 | | | 100 | | | 0 | 100 | 96 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1387 | | | 1424 | | | 278 | 274 | 883 | 253 | 280 | 888 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 221 | 167 | 177 | 356 |
| Volume Left | 221 | 0 | 0 | 318 |
| Volume Right | 0 | 0 | 31 | 38 |
| cSH | 1387 | 1700 | 1700 | 300 |
| Volume to Capacity | 0.16 | 0.10 | 0.10 | 1.19 |
| Queue Length 95th (ft) | 14 | 0 | 0 | 389 |
| Control Delay (s) | 8.1 | 0.0 | 0.0 | 149.3 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 4.6 | | 0.0 | 149.3 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 59.6 | | |
| Intersection Capacity Utilization | 45.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1389 | 583 | 782 | 1474 | 376 | 368 | 188 |
| v/c Ratio | 0.97 | 0.62 | 0.98 | 0.61 | 1.00 | 0.89 | 0.48 |
| Control Delay | 49.4 | 7.9 | 69.4 | 11.2 | 89.3 | 57.4 | 27.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.4 | 7.9 | 69.4 | 13.0 | 89.3 | 57.4 | 27.1 |
| Queue Length 50th (ft) | 495 | 45 | 284 | 272 | 281 | 228 | 73 |
| Queue Length 95th (ft) | #656 | 151 | #410 | 333 | #485 | #418 | 148 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1439 | 937 | 800 | 2414 | 377 | 415 | 393 |
| Starvation Cap Reductn | 0 | 0 | 0 | 730 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.97 | 0.62 | 0.98 | 0.88 | 1.00 | 0.89 | 0.48 |

Intersection Summary

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

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 164 | 1905 | 1564 | 494 | 502 | 479 | 466 |
| v/c Ratio | 0.66 | 0.62 | 0.74 | 0.54 | 1.08 | 1.01 | 0.98 |
| Control Delay | 49.0 | 12.4 | 26.1 | 4.6 | 97.4 | 72.7 | 64.7 |
| Queue Delay | 0.0 | 0.5 | 31.8 | 0.6 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 12.9 | 57.9 | 5.1 | 97.4 | 72.7 | 64.7 |
| Queue Length 50th (ft) | 90 | 230 | 269 | 0 | ~338 | ~258 | 231 |
| Queue Length 95th (ft) | 144 | 275 | 362 | 66 | #540 | #484 | #445 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 393 | 3067 | 2104 | 909 | 466 | 474 | 476 |
| Starvation Cap Reductn | 0 | 619 | 629 | 147 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.78 | 1.06 | 0.65 | 1.08 | 1.01 | 0.98 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 314 | 263 | 72 | 439 | 0 | 0 | 0 | 0 | 13 | 0 | 225 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 349 | 292 | 80 | 488 | 0 | 0 | 0 | 0 | 14 | 0 | 250 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 488 | | | 641 | | | 1122 | 997 | 349 | 997 | 1289 | 488 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 488 | | | 641 | | | 1122 | 997 | 349 | 997 | 1289 | 488 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 92 | | | 100 | 100 | 100 | 93 | 100 | 57 |
| cM capacity (veh/h) | 1086 | | | 943 | | | 98 | 225 | 699 | 198 | 151 | 576 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 349 | 292 | 80 | 488 | 264 |
| Volume Left | 0 | 0 | 80 | 0 | 14 |
| Volume Right | 0 | 292 | 0 | 0 | 250 |
| cSH | 1700 | 1700 | 943 | 1700 | 609 |
| Volume to Capacity | 0.21 | 0.17 | 0.08 | 0.29 | 0.43 |
| Queue Length 95th (ft) | 0 | 0 | 7 | 0 | 55 |
| Control Delay (s) | 0.0 | 0.0 | 9.2 | 0.0 | 16.4 |
| Lane LOS | | | A | | C |
| Approach Delay (s) | 0.0 | | 1.3 | | 16.4 |
| Approach LOS | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 133 | 194 | 0 | 0 | 220 | 32 | 292 | 0 | 130 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 151 | 220 | 0 | 0 | 250 | 36 | 332 | 0 | 148 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 286 | | | 220 | | | 791 | 809 | 220 | 939 | 791 | 268 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 286 | | | 220 | | | 791 | 809 | 220 | 939 | 791 | 268 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 88 | | | 100 | | | 0 | 100 | 82 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1259 | | | 1361 | | | 278 | 279 | 824 | 184 | 285 | 775 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 151 | 220 | 286 | 480 |
| Volume Left | 151 | 0 | 0 | 332 |
| Volume Right | 0 | 0 | 36 | 148 |
| cSH | 1259 | 1700 | 1700 | 349 |
| Volume to Capacity | 0.12 | 0.13 | 0.17 | 1.37 |
| Queue Length 95th (ft) | 10 | 0 | 0 | 596 |
| Control Delay (s) | 8.3 | 0.0 | 0.0 | 214.9 |
| Lane LOS | A | | | F |
| Approach Delay (s) | 3.4 | | 0.0 | 214.9 |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 91.7 | | |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 790 | 200 | 465 | 810 | 1126 | 220 | 222 |
| v/c Ratio | 0.78 | 0.33 | 0.70 | 0.32 | 1.58 | 0.46 | 0.46 |
| Control Delay | 45.5 | 6.0 | 26.5 | 5.0 | 300.4 | 9.4 | 8.6 |
| Queue Delay | 6.3 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 51.8 | 6.0 | 27.0 | 5.0 | 300.4 | 9.4 | 8.6 |
| Queue Length 50th (ft) | 295 | 0 | 118 | 64 | ~639 | 4 | 0 |
| Queue Length 95th (ft) | 372 | 55 | 196 | m96 | #771 | 76 | 69 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1013 | 604 | 669 | 2522 | 713 | 475 | 479 |
| Starvation Cap Reductn | 176 | 0 | 33 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.94 | 0.33 | 0.73 | 0.32 | 1.58 | 0.46 | 0.46 |

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.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 345 | 1511 | 1248 | 548 | 299 | 691 |
| v/c Ratio | 0.82 | 0.39 | 0.64 | 0.51 | 1.04 | 1.21 |
| Control Delay | 104.5 | 6.6 | 15.5 | 6.3 | 112.3 | 146.1 |
| Queue Delay | 0.0 | 0.3 | 49.7 | 4.2 | 0.0 | 1.3 |
| Total Delay | 104.5 | 6.9 | 65.3 | 10.5 | 112.3 | 147.4 |
| Queue Length 50th (ft) | 147 | 128 | 338 | 170 | ~249 | ~322 |
| Queue Length 95th (ft) | m#193 | m86 | m387 | m228 | #428 | #456 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 423 | 3839 | 1939 | 1074 | 288 | 570 |
| Starvation Cap Reductn | 0 | 1447 | 924 | 435 | 0 | 0 |
| Spillback Cap Reductn | 0 | 415 | 0 | 0 | 0 | 87 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.82 | 0.63 | 1.23 | 0.86 | 1.04 | 1.43 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 205 | 113 | 0 | 0 | 115 | 19 | 257 | 0 | 22 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 209 | 115 | 0 | 0 | 117 | 19 | 262 | 0 | 22 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 137 | | | 115 | | | 661 | 670 | 115 | 683 | 661 | 127 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 137 | | | 115 | | | 661 | 670 | 115 | 683 | 661 | 127 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 86 | | | 100 | | | 22 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1460 | | | 1486 | | | 337 | 326 | 943 | 318 | 330 | 929 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 209 | 115 | 137 | 285 |
| Volume Left | 209 | 0 | 0 | 262 |
| Volume Right | 0 | 0 | 19 | 22 |
| cSH | 1460 | 1700 | 1700 | 355 |
| Volume to Capacity | 0.14 | 0.07 | 0.08 | 0.80 |
| Queue Length 95th (ft) | 13 | 0 | 0 | 171 |
| Control Delay (s) | 7.9 | 0.0 | 0.0 | 45.7 |
| Lane LOS | A | | | E |
| Approach Delay (s) | 5.1 | | 0.0 | 45.7 |
| Approach LOS | | | | E |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 19.6 | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1113 | 577 | 760 | 1456 | 292 | 295 | 223 |
| v/c Ratio | 0.75 | 0.60 | 0.94 | 0.58 | 0.86 | 0.78 | 0.62 |
| Control Delay | 31.3 | 6.3 | 61.7 | 10.0 | 66.8 | 45.8 | 34.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.3 | 6.3 | 61.7 | 11.2 | 66.8 | 45.8 | 34.5 |
| Queue Length 50th (ft) | 354 | 27 | 274 | 266 | 205 | 161 | 98 |
| Queue Length 95th (ft) | 440 | 120 | #395 | 326 | #340 | 272 | 186 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1489 | 964 | 812 | 2497 | 377 | 414 | 390 |
| Starvation Cap Reductn | 0 | 0 | 0 | 738 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.75 | 0.60 | 0.94 | 0.83 | 0.77 | 0.71 | 0.57 |

Intersection Summary

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

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 113 | 1542 | 1686 | 557 | 479 | 447 | 445 |
| v/c Ratio | 0.56 | 0.50 | 0.71 | 0.55 | 1.05 | 0.96 | 0.93 |
| Control Delay | 48.1 | 10.9 | 22.5 | 4.0 | 89.9 | 61.5 | 55.2 |
| Queue Delay | 0.0 | 0.0 | 15.3 | 0.6 | 0.0 | 0.0 | 0.0 |
| Total Delay | 48.1 | 10.9 | 37.8 | 4.6 | 89.9 | 61.5 | 55.2 |
| Queue Length 50th (ft) | 62 | 167 | 282 | 0 | ~314 | 228 | 214 |
| Queue Length 95th (ft) | 110 | 202 | 373 | 63 | #512 | #442 | #413 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 409 | 3067 | 2383 | 1019 | 456 | 464 | 476 |
| Starvation Cap Reductn | 0 | 0 | 721 | 182 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.28 | 0.50 | 1.01 | 0.67 | 1.05 | 0.96 | 0.93 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 289 | 153 | 68 | 289 | 0 | 0 | 0 | 0 | 28 | 0 | 123 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 301 | 159 | 71 | 301 | 0 | 0 | 0 | 0 | 29 | 0 | 128 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 301 | | | 460 | | | 808 | 744 | 301 | 744 | 903 | 301 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 301 | | | 460 | | | 808 | 744 | 301 | 744 | 903 | 301 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 94 | | | 100 | 100 | 100 | 91 | 100 | 83 |
| cM capacity (veh/h) | 1272 | | | 1090 | | | 237 | 323 | 743 | 317 | 261 | 736 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 301 | 159 | 71 | 301 | 157 |
| Volume Left | 0 | 0 | 71 | 0 | 29 |
| Volume Right | 0 | 159 | 0 | 0 | 128 |
| cSH | 1700 | 1700 | 1090 | 1700 | 904 |
| Volume to Capacity | 0.18 | 0.09 | 0.06 | 0.18 | 0.17 |
| Queue Length 95th (ft) | 0 | 0 | 5 | 0 | 16 |
| Control Delay (s) | 0.0 | 0.0 | 8.5 | 0.0 | 12.1 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 1.6 | | 12.1 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 130 | 187 | 0 | 0 | 190 | 2 | 168 | 0 | 92 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 140 | 201 | 0 | 0 | 204 | 2 | 181 | 0 | 99 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 206 | | | 201 | | | 686 | 687 | 201 | 785 | 686 | 205 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 206 | | | 201 | | | 686 | 687 | 201 | 785 | 686 | 205 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 90 | | | 100 | | | 46 | 100 | 88 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1365 | | | 1383 | | | 332 | 334 | 842 | 254 | 335 | 840 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 140 | 201 | 206 | 280 |
| Volume Left | 140 | 0 | 0 | 181 |
| Volume Right | 0 | 0 | 2 | 99 |
| cSH | 1365 | 1700 | 1700 | 423 |
| Volume to Capacity | 0.10 | 0.12 | 0.12 | 0.66 |
| Queue Length 95th (ft) | 9 | 0 | 0 | 116 |
| Control Delay (s) | 7.9 | 0.0 | 0.0 | 28.7 |
| Lane LOS | A | | | D |
| Approach Delay (s) | 3.3 | | 0.0 | 28.7 |
| Approach LOS | | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 11.0 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

## 11: I-15 SB On Ramp/I-15 SB Off Ramp & Diamond Dr./Railroad Canyon Rd.

4/7/2015

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 938 | 245 | 422 | 778 | 996 | 212 | 210 |
| v/c Ratio | 0.91 | 0.39 | 0.63 | 0.31 | 1.40 | 0.45 | 0.44 |
| Control Delay | 54.6 | 7.2 | 27.6 | 7.2 | 223.7 | 8.8 | 8.6 |
| Queue Delay | 46.5 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 101.1 | 7.2 | 27.9 | 7.2 | 223.7 | 8.8 | 8.6 |
| Queue Length 50th (ft) | 368 | 8 | 129 | 96 | ~530 | 1 | 0 |
| Queue Length 95th (ft) | #488 | 70 | 214 | 150 | #660 | 69 | 68 |
| Internal Link Dist (ft) | 335 | | | 485 | | 1073 | |
| Turn Bay Length (ft) | | | 185 | | 280 | | 280 |
| Base Capacity (vph) | 1033 | 621 | 669 | 2522 | 713 | 473 | 473 |
| Starvation Cap Reductn | 182 | 0 | 41 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.10 | 0.39 | 0.67 | 0.31 | 1.40 | 0.45 | 0.44 |

### 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.

| Lane Group | EBL | EBT | WBT | WBR | NBT | NBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 372 | 1561 | 1391 | 615 | 174 | 449 |
| v/c Ratio | 0.84 | 0.40 | 0.70 | 0.55 | 0.66 | 0.87 |
| Control Delay | 100.5 | 6.6 | 15.8 | 6.3 | 60.5 | 54.8 |
| Queue Delay | 0.0 | 0.3 | 49.0 | 3.5 | 0.0 | 9.1 |
| Total Delay | 100.5 | 6.9 | 64.7 | 9.8 | 60.5 | 63.9 |
| Queue Length 50th (ft) | 159 | 173 | 415 | 201 | 127 | 143 |
| Queue Length 95th (ft) | m175 | m141 | m491 | m269 | 203 | #224 |
| Internal Link Dist (ft) | | 485 | 178 | | 1151 | |
| Turn Bay Length (ft) | 170 | | | | | 335 |
| Base Capacity (vph) | 444 | 3925 | 1991 | 1116 | 294 | 560 |
| Starvation Cap Reductn | 0 | 1432 | 817 | 396 | 0 | 0 |
| Spillback Cap Reductn | 0 | 366 | 0 | 0 | 0 | 85 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.84 | 0.63 | 1.18 | 0.85 | 0.59 | 0.95 |

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.

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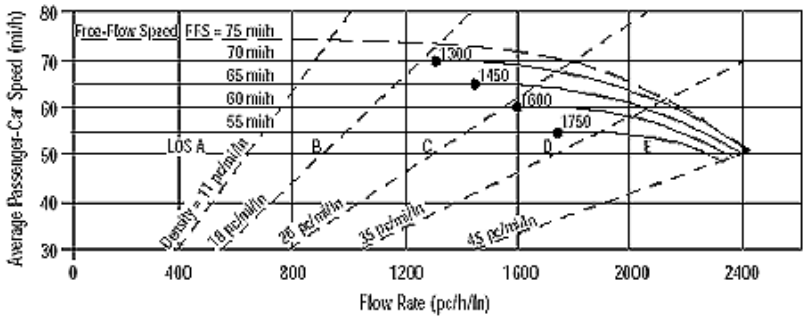
# APPENDIX 6.7

Opening Year (2016) Without Project Conditions
Basic Freeway Segment HCS+ Analysis Worksheets

# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *2996* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1140* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *16.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *B* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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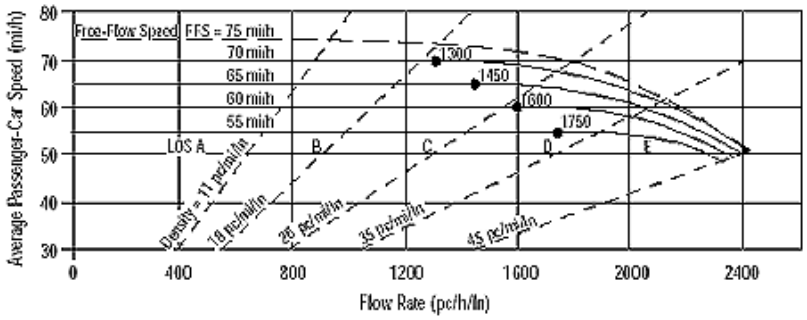
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *2992* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1138* | pc/h/ln | Design LOS | | |
| S | *70.0* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *16.3* | pc/mi/ln | S | | mi/h |
| LOS | *B* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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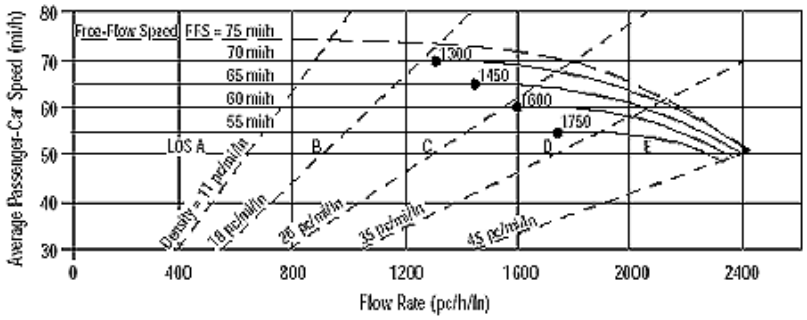
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3583* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1357* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.4* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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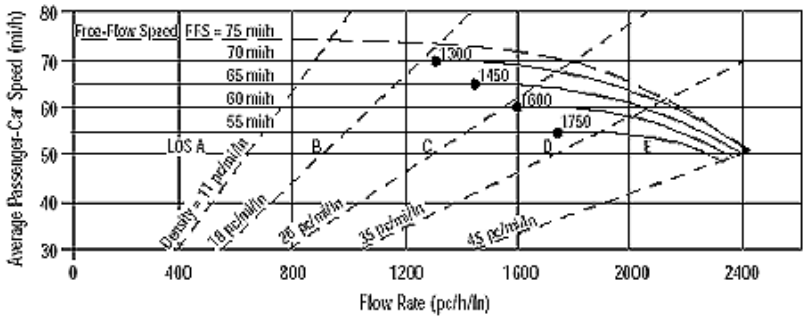
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3843* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *8* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.962* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1448* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.9* | mi/h | S | mi/h |
| D = $v_p$ / S | *20.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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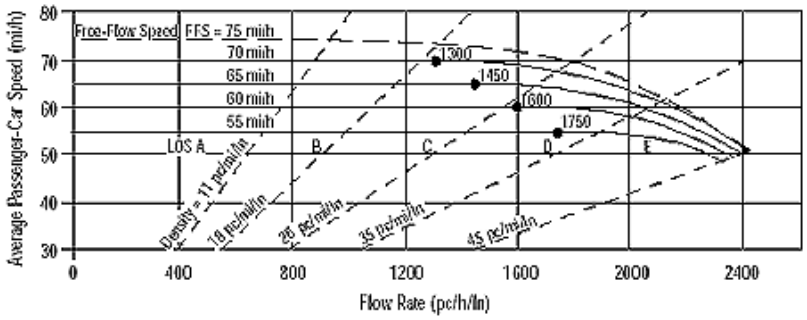
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3775* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *7* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.966* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1416* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *20.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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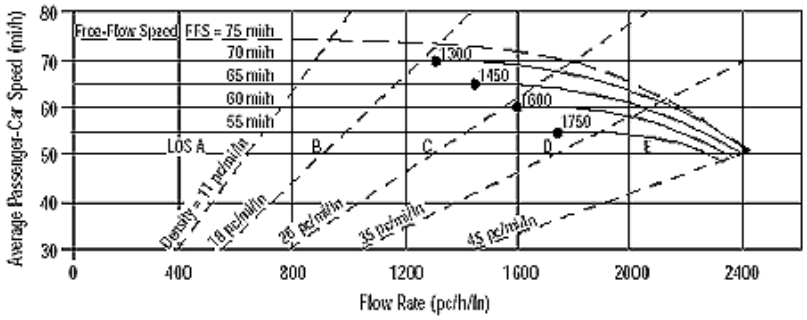
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4682* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| | | | Design LOS | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1790* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *26.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| | |
|---|---|
| N - Number of lanes | S - Speed |
| V - Hourly volume | D - Density |
| $v_p$ - Flow rate | FFS - Free-flow speed |
| LOS - Level of service | BFFS - Base free-flow speed |
| DDHV - Directional design hour volume | |

| | |
|---|---|
| $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |

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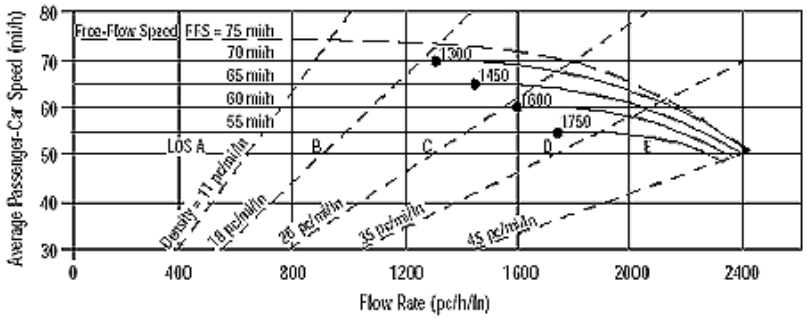
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4725* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1798* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *67.9* | mi/h | S | mi/h |
| D = $v_p$ / S | *26.5* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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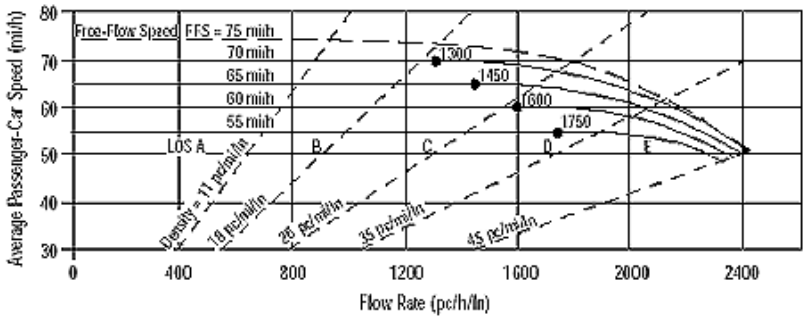
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5167* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1956* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *65.7* | mi/h | S | mi/h |
| D = $v_p$ / S | *29.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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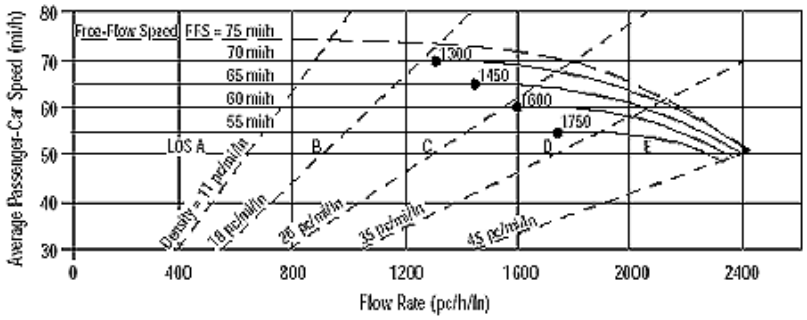
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5508* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2085* | pc/h/ln | Design LOS | |
| S | *63.1* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *33.1* | pc/mi/ln | S | mi/h |
| LOS | *D* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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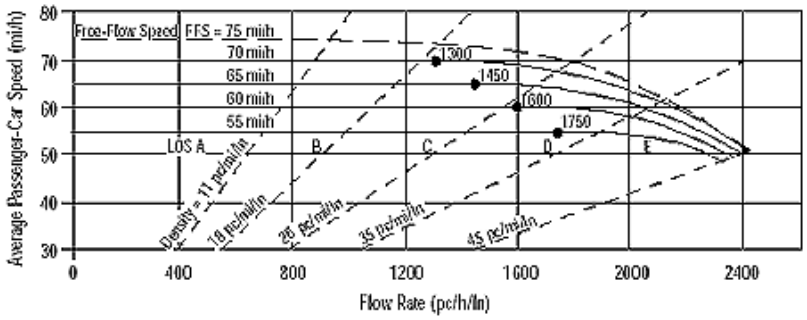
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4458* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1704* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.8* | mi/h | S | mi/h |
| D = $v_p$ / S | *24.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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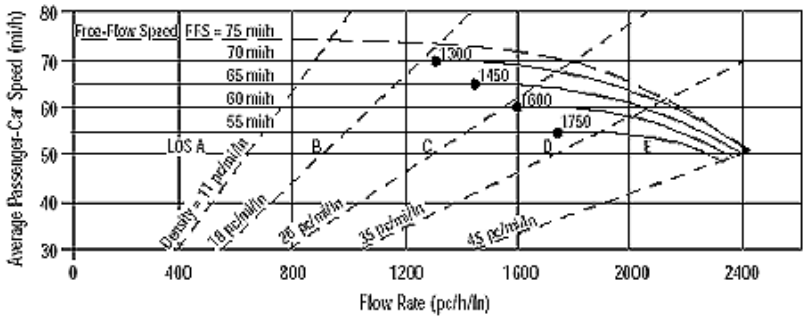
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4084* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1561* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.6* | mi/h | S | mi/h |
| D = $v_p$ / S | *22.4* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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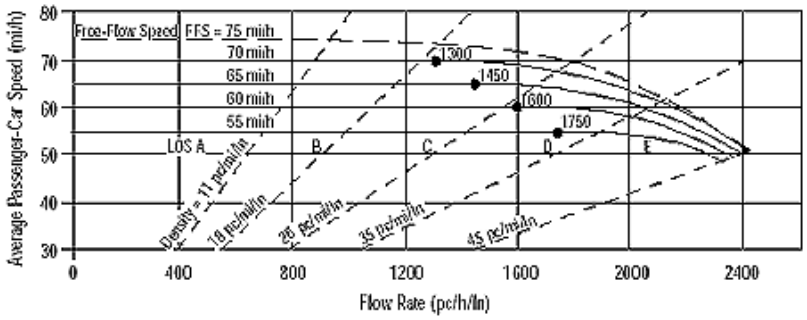
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4138* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1574* | pc/h/ln | Design LOS | | |
| S | *69.6* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *22.6* | pc/mi/ln | S | | mi/h |
| LOS | *C* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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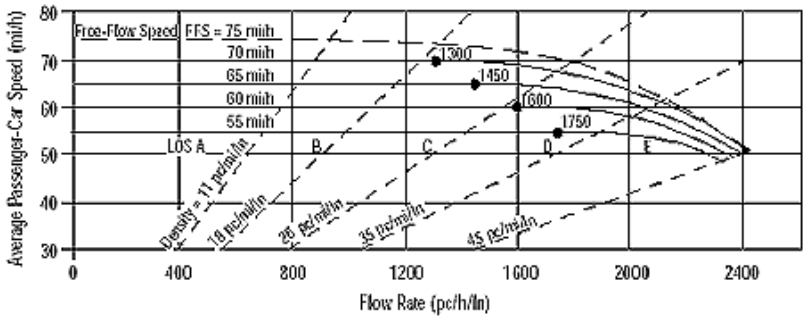
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4526* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1714* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.7* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.0* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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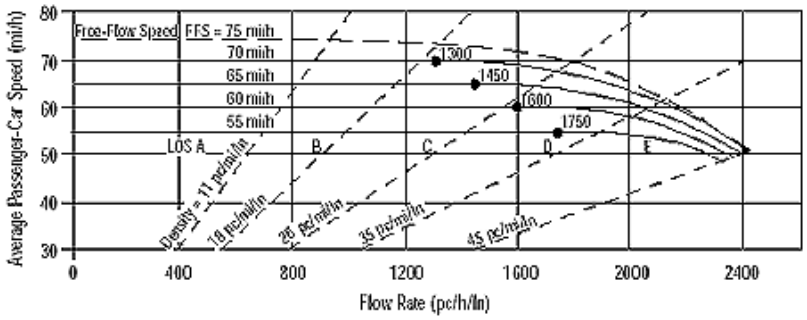
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4623* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1750* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.4* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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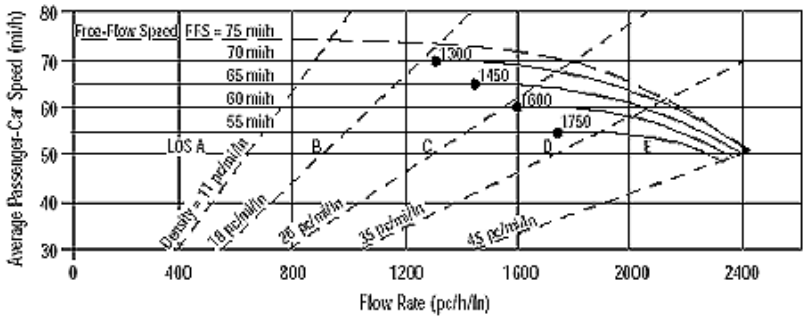
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3849* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1471* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.9* | mi/h | S | mi/h |
| D = $v_p$ / S | *21.1* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| | | | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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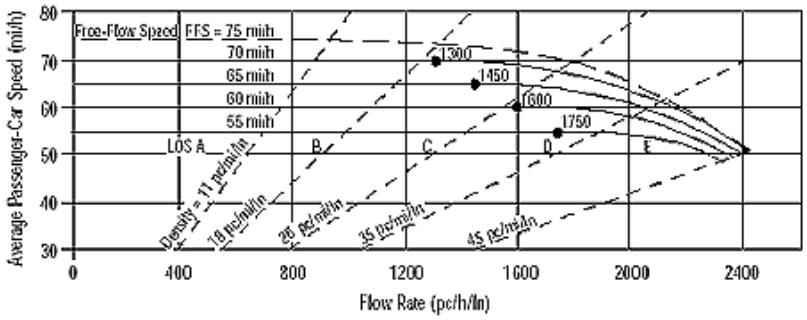
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4816* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| | | | Design LOS | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1841* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *67.4* | mi/h | S | mi/h |
| D = $v_p$ / S | *27.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| | |
|---|---|
| N - Number of lanes | S - Speed |
| V - Hourly volume | D - Density |
| $v_p$ - Flow rate | FFS - Free-flow speed |
| LOS - Level of service | BFFS - Base free-flow speed |
| DDHV - Directional design hour volume | |

| | |
|---|---|
| $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |

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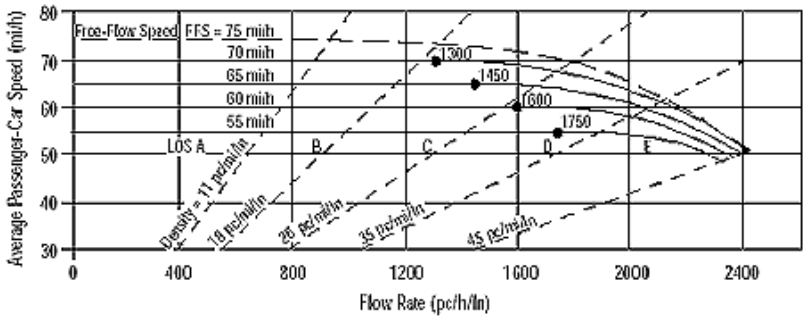


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4886* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1859* | pc/h/ln | Design LOS | |
| S | *67.1* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *27.7* | pc/mi/ln | S | mi/h |
| LOS | *D* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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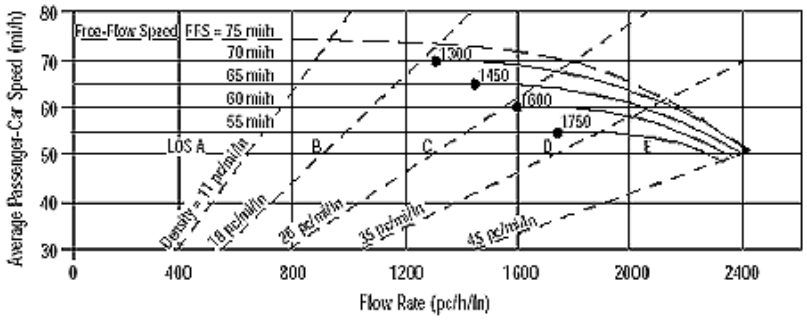


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5596* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2119* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *62.3* | mi/h | S | mi/h |
| D = $v_p$ / S | *34.0* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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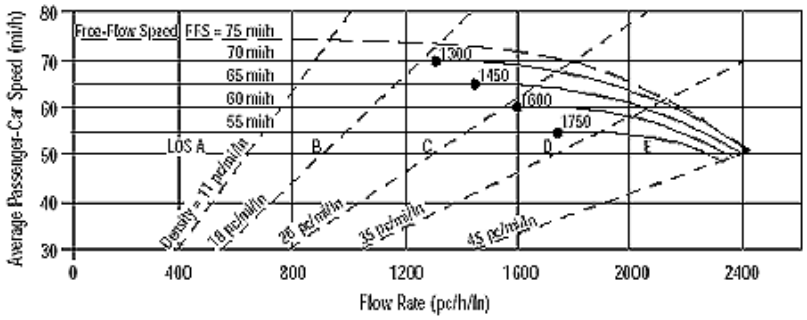


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5853* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| | | | Design LOS | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2216* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| S | *59.6* | mi/h | S | | mi/h |
| D = $v_p$ / S | *37.2* | pc/mi/ln | D = $v_p$ / S | | pc/mi/ln |
| LOS | *E* | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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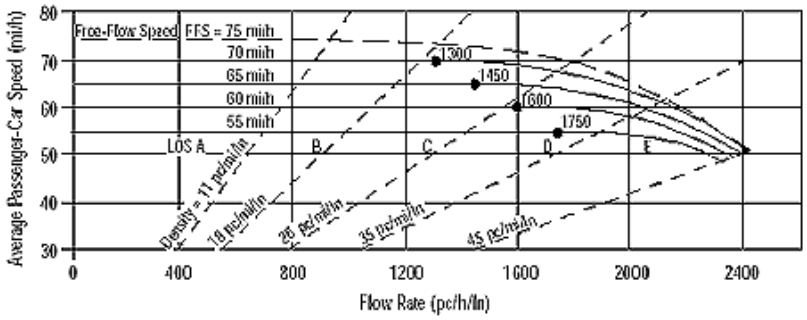


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5698* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2157* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *61.3* | mi/h | S | mi/h |
| D = $v_p$ / S | *35.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *E* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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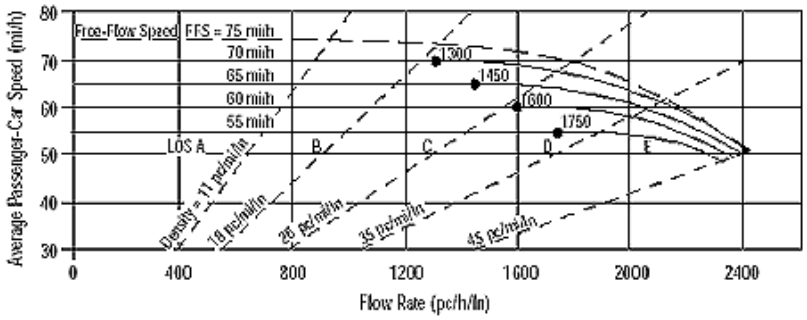


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3605* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1378* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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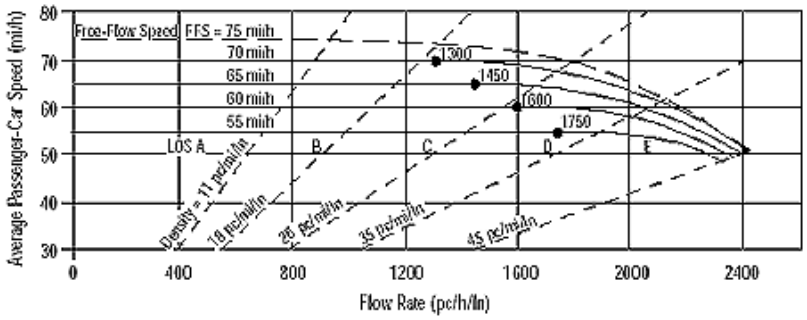
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3630* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| | | | Design LOS | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1381* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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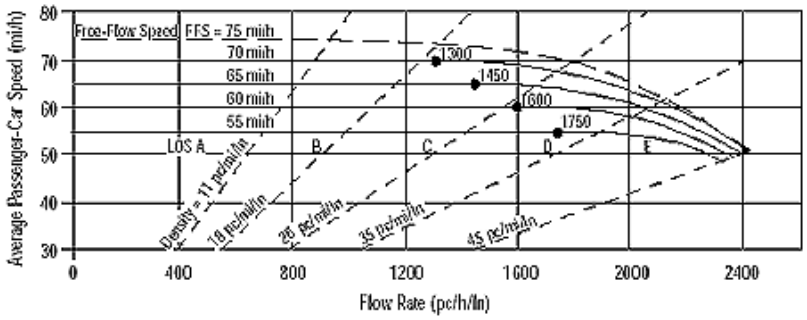
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4105* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1554* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.6* | mi/h | S | mi/h |
| D = $v_p$ / S | *22.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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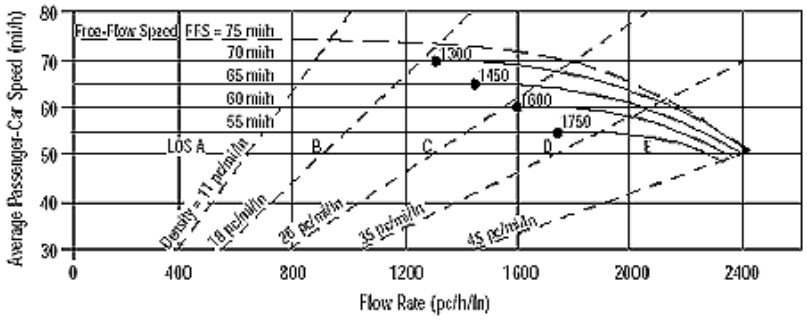
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4175* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1581* | pc/h/ln | Design LOS | |
| S | *69.5* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *22.7* | pc/mi/ln | S | mi/h |
| LOS | *C* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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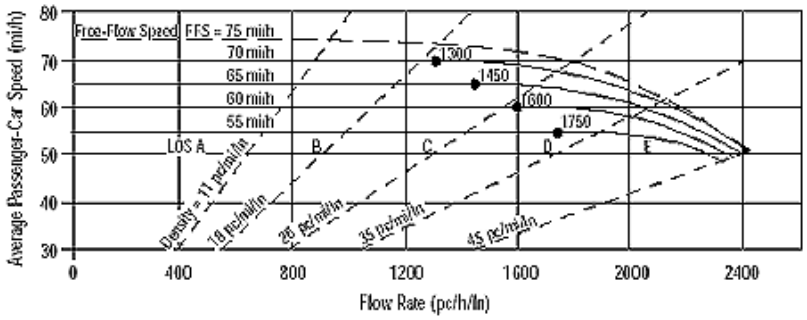
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3513* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1343* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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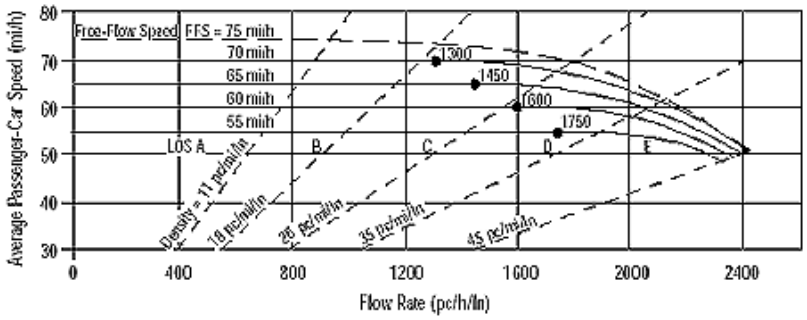
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4466* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1707* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.7* | mi/h | S | mi/h |
| D = $v_p$ / S | *24.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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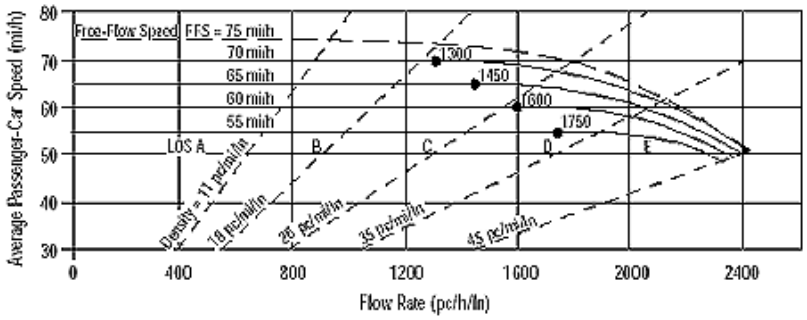
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4497* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1711* | pc/h/ln | Design LOS | |
| S | *68.7* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *24.9* | pc/mi/ln | S | mi/h |
| LOS | *C* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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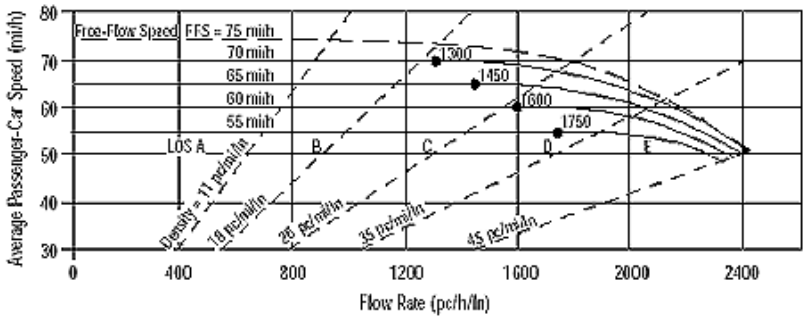
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5134* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1953* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *65.7* | mi/h | S | mi/h |
| D = $v_p$ / S | *29.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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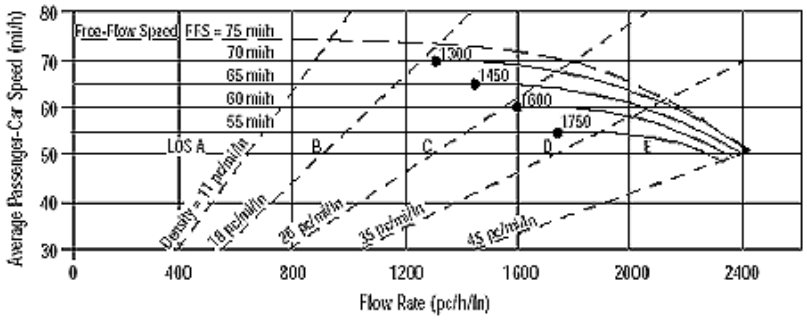
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5262* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1992* | pc/h/ln | Design LOS | | |
| S | *65.0* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *30.6* | pc/mi/ln | S | | mi/h |
| LOS | *D* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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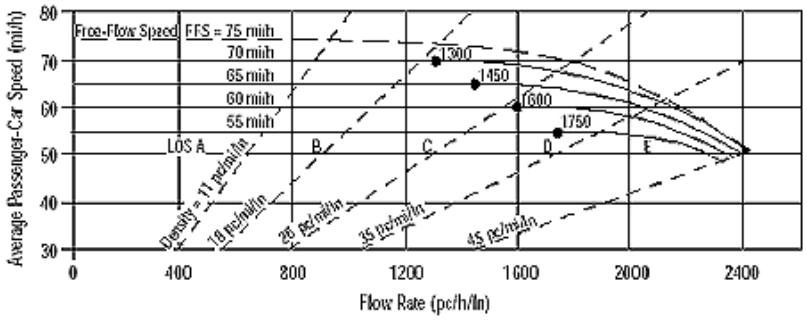
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 No Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4620* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1758* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.3* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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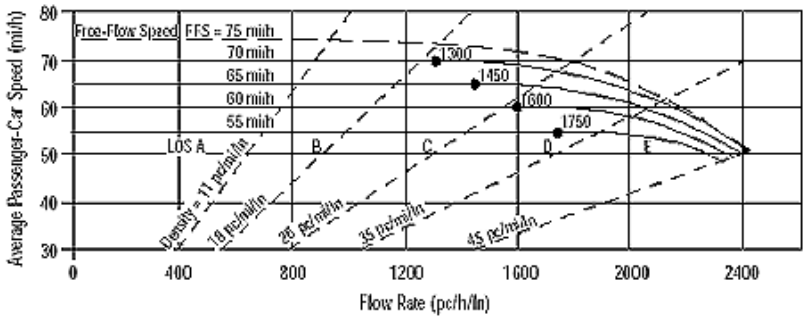
# APPENDIX 6.8

Opening Year (2016) With Project Conditions
Basic Freeway Segment HCS+ Analysis Worksheets

# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3051* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1161* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *16.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *B* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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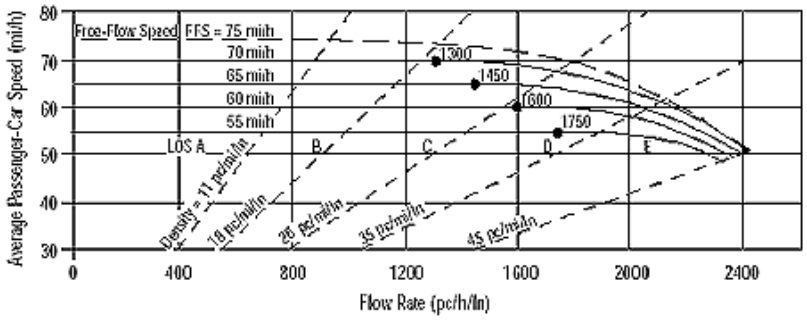
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3060* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1164* | pc/h/ln | Design LOS | | |
| S | *70.0* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *16.6* | pc/mi/ln | S | | mi/h |
| LOS | *B* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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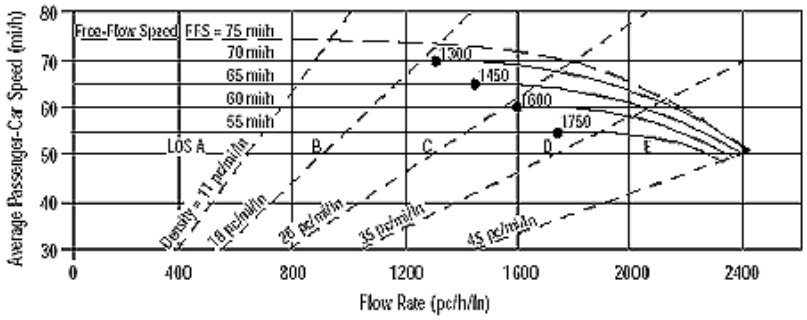
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2014 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3644* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *8* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.962* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1373* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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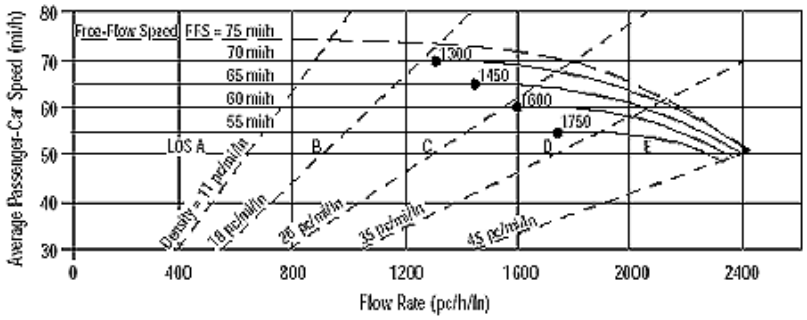
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3904* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *8* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.962* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1471* | pc/h/ln | Design LOS | | |
| S | *69.9* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *21.1* | pc/mi/ln | S | | mi/h |
| LOS | *C* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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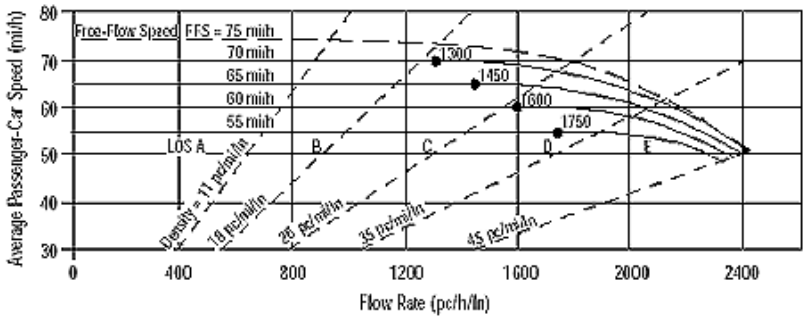
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3805* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *7* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.966* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1427* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.9* | mi/h | S | mi/h |
| D = $v_p$ / S | *20.4* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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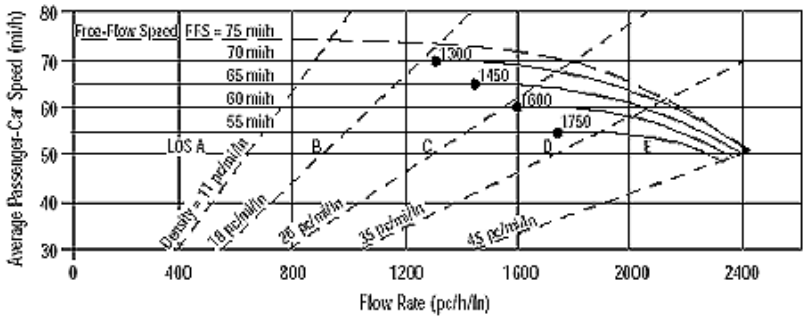
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4722* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1805* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *67.8* | mi/h | S | mi/h |
| D = $v_p$ / S | *26.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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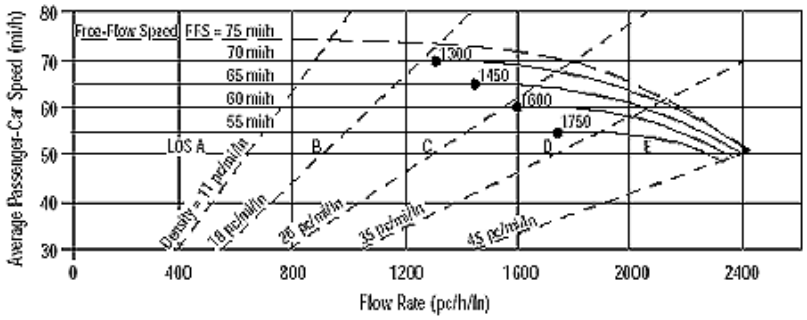
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4776* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| | | | Design LOS | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1817* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| S | *67.7* | mi/h | S | | mi/h |
| D = $v_p$ / S | *26.9* | pc/mi/ln | D = $v_p$ / S | | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | | |

## Glossary / Factor Location

| | | | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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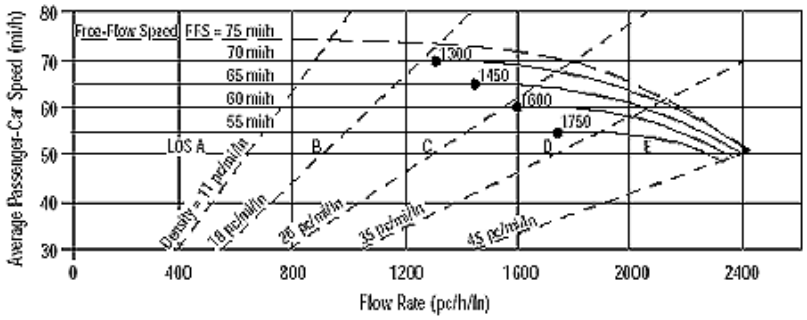
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5248* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1987* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *65.1* | mi/h | S | mi/h |
| D = $v_p$ / S | *30.5* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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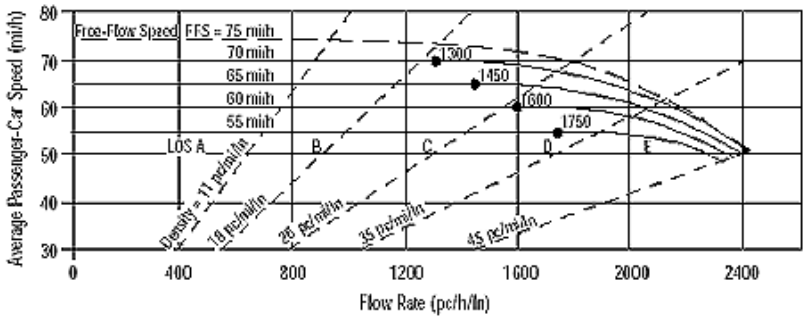
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5589* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2116* | pc/h/ln | Design LOS | | |
| S | *62.3* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *33.9* | pc/mi/ln | S | | mi/h |
| LOS | *D* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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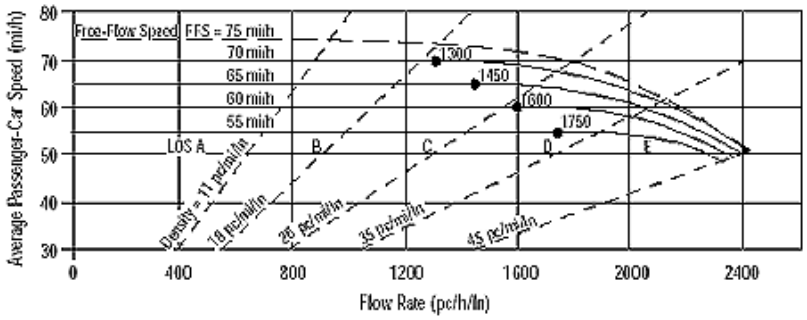
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *AM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4498* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1719* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.6* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.0* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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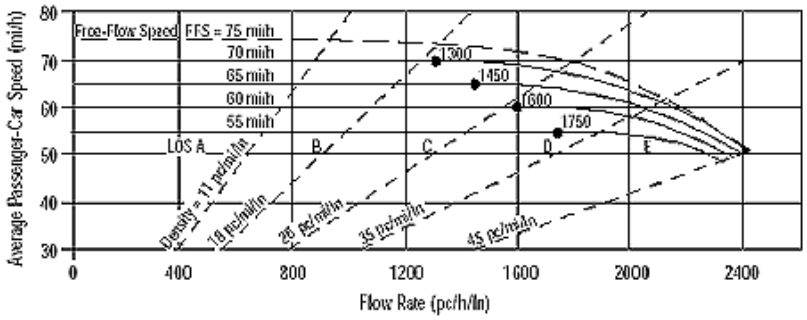
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4150* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1579* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.5* | mi/h | S | mi/h |
| D = $v_p$ / S | *22.7* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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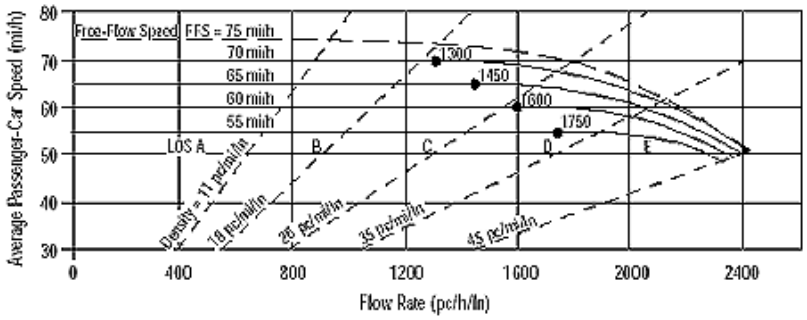
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4220* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1605* | pc/h/ln | Design LOS | | |
| S | *69.4* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *23.1* | pc/mi/ln | S | | mi/h |
| LOS | *C* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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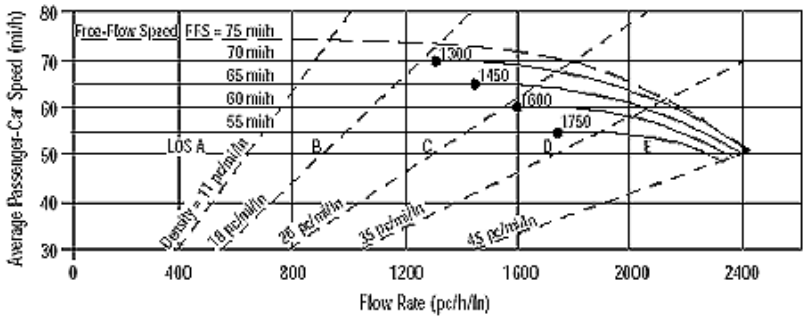
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4626* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1752* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.3* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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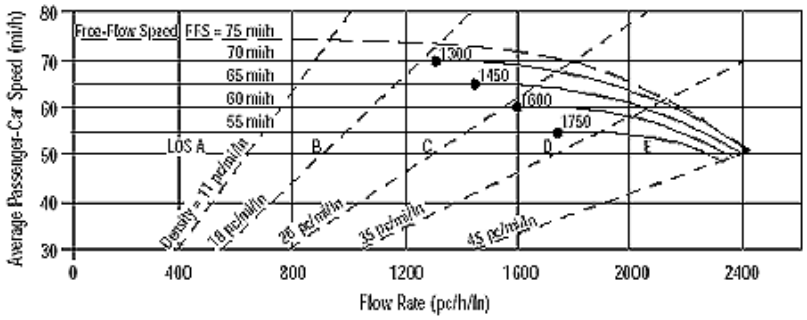
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4723* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1788* | pc/h/ln | Design LOS | | |
| S | *68.0* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *26.3* | pc/mi/ln | S | | mi/h |
| LOS | *D* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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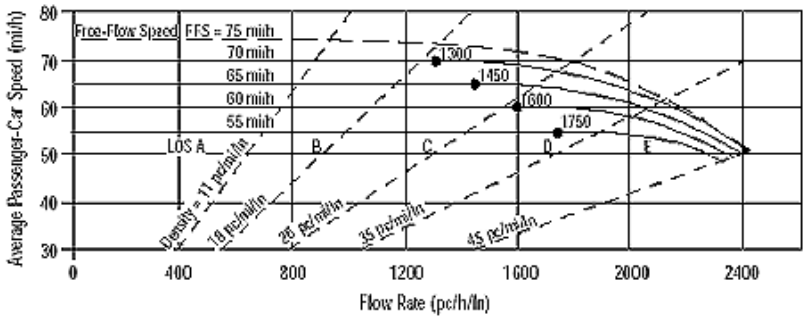
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3899* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1490* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.8* | mi/h | S | mi/h |
| D = $v_p$ / S | *21.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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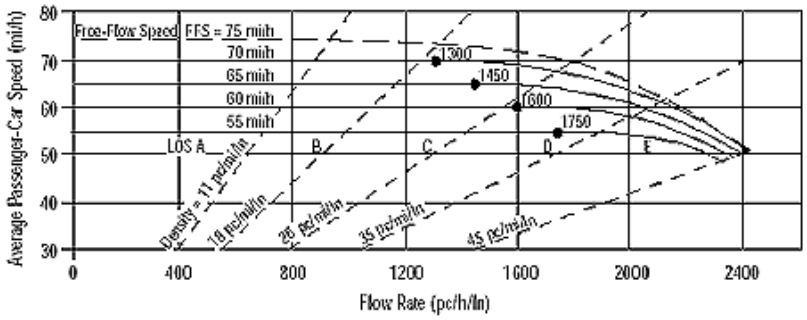
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4882* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1866* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *67.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *27.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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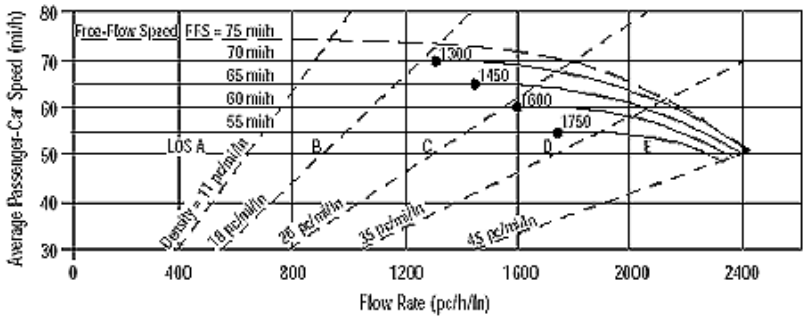
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4969* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1890* | pc/h/ln | Design LOS | |
| S | *66.7* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *28.3* | pc/mi/ln | S | mi/h |
| LOS | *D* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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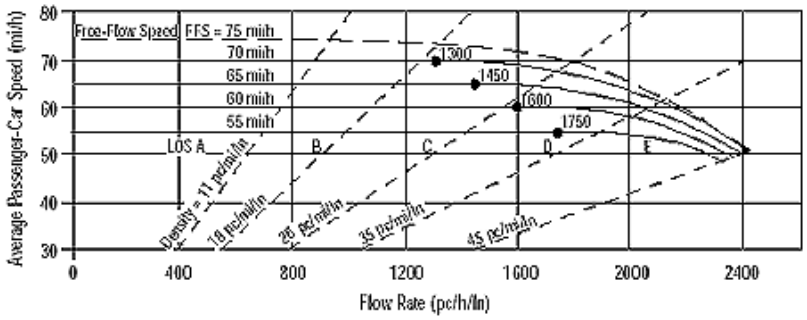
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5695* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2156* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *61.3* | mi/h | S | mi/h |
| D = $v_p$ / S | *35.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *E* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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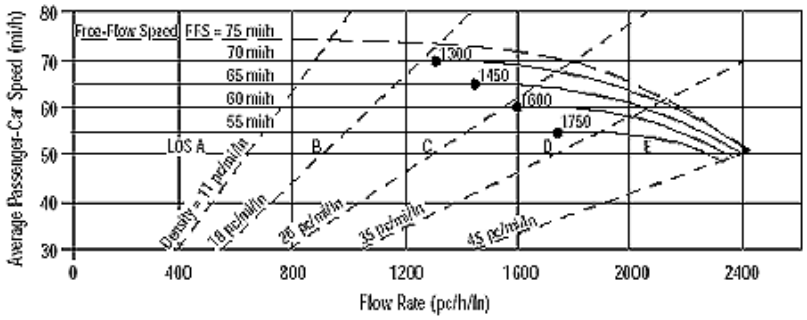


| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5952* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| | | | Design LOS | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2254* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| S | *58.5* | mi/h | S | | mi/h |
| D = $v_p$ / S | *38.5* | pc/mi/ln | D = $v_p$ / S | | pc/mi/ln |
| LOS | *E* | | Required Number of Lanes, N | | |

## Glossary / Factor Location

| | | | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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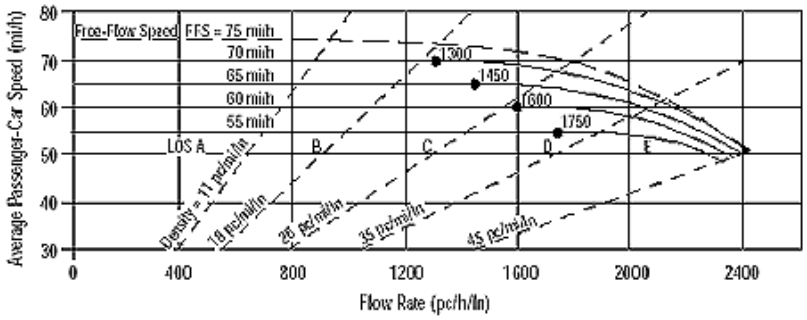
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *PM Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5747* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2176* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *60.8* | mi/h | S | mi/h |
| D = $v_p$ / S | *35.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *E* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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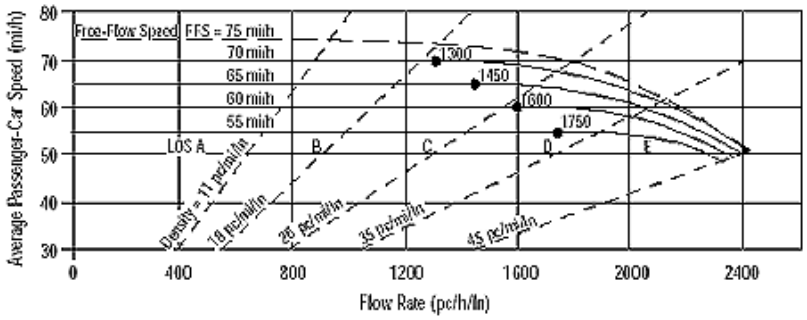
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3701* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1408* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *20.1* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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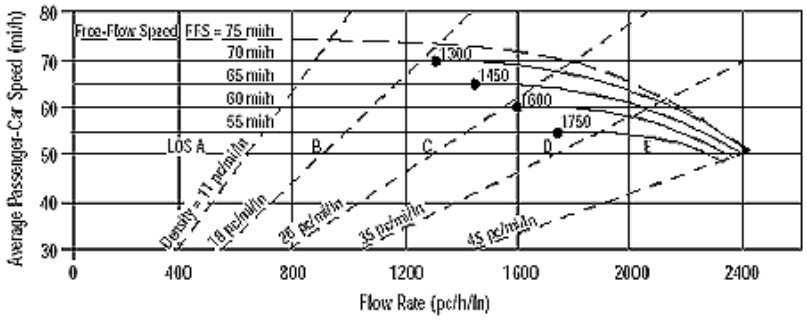
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *3750* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1427* | pc/h/ln | Design LOS | | |
| S | *69.9* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| D = $v_p$ / S | *20.4* | pc/mi/ln | S | | mi/h |
| LOS | *C* | | D = $v_p$ / S | | pc/mi/ln |
| | | | Required Number of Lanes, N | | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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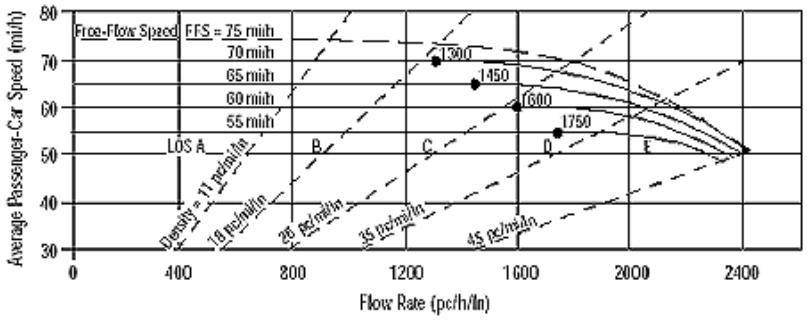
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4249* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1609* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.4* | mi/h | S | mi/h |
| D = $v_p$ / S | *23.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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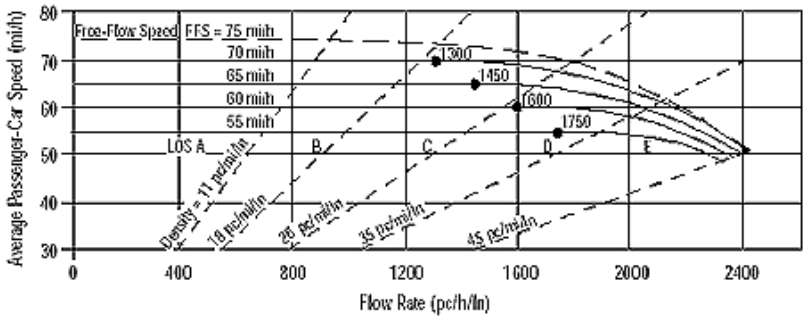
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4319* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1635* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *69.2* | mi/h | S | mi/h |
| D = $v_p$ / S | *23.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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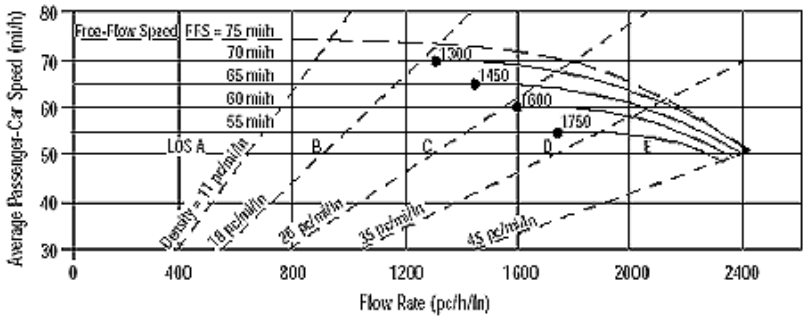
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Southbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *South of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *3583* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *11* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.948* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1370* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *70.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *19.6* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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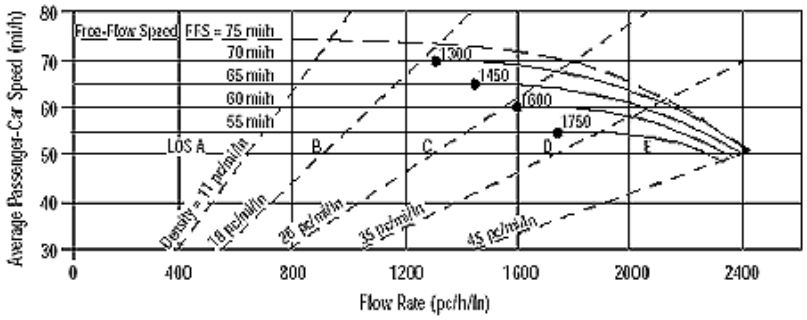
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *North of Nichols Road* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4562* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1736* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.5* | mi/h | S | mi/h |
| D = $v_p$ / S | *25.3* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *C* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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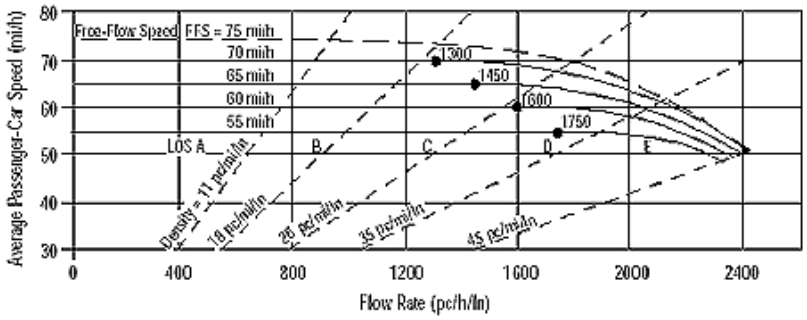
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Nichols Road to Central Avenue* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *4617* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1756* | pc/h/ln | Design LOS | |
| S | *68.3* | mi/h | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| D = $v_p$ / S | *25.7* | pc/mi/ln | S | mi/h |
| LOS | *C* | | D = $v_p$ / S | pc/mi/ln |
| | | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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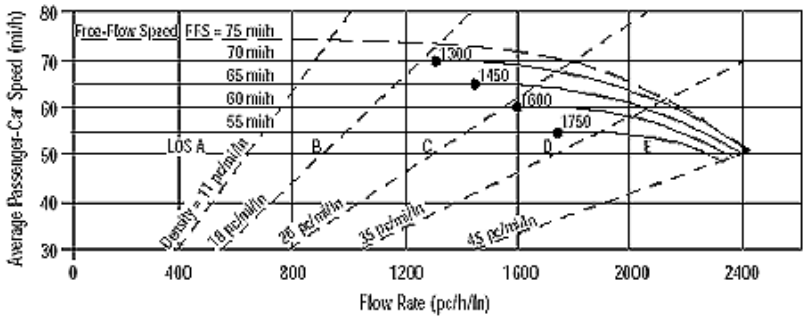
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

| ***General Information*** | | ***Site Information*** | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Central Avenue to Main Street* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

| ***Flow Inputs*** | | | | |
|---|---|---|---|---|
| Volume, V | *5278* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

| **Calculate Flow Adjustments** | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

| **Speed Inputs** | | | **Calc Speed Adj and FFS** | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

| **LOS and Performance Measures** | | | **Design (N)** | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1998* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *64.9* | mi/h | S | mi/h |
| D = $v_p$ / S | *30.8* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

| **Glossary** | | **Factor Location** | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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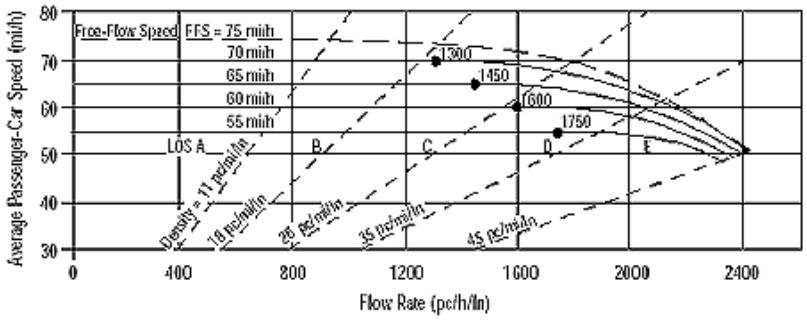
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *Main Street to Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *5406* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *9* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.957* |

## Speed Inputs / Calc Speed Adj and FFS

| | | | | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| | | | | | |
|---|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | | |
| | | | Design LOS | | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *2047* | pc/h/ln | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | | pc/h |
| S | *63.9* | mi/h | S | | mi/h |
| D = $v_p$ / S | *32.0* | pc/mi/ln | D = $v_p$ / S | | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | | |

## Glossary / Factor Location

| | | | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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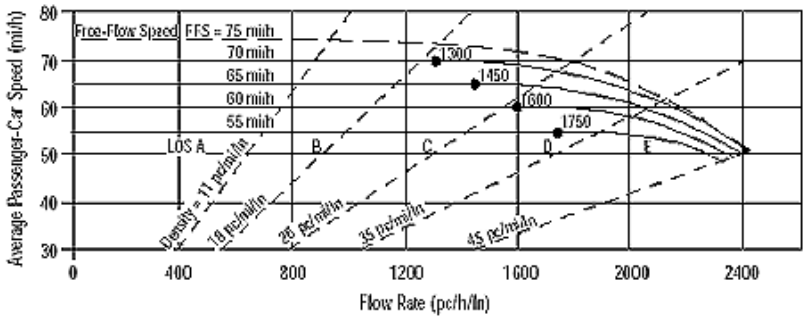
# BASIC FREEWAY SEGMENTS WORKSHEET




| Application | Input | Output |
|---|---|---|
| Operational (LOS) | FFS, N, $v_p$ | LOS, S, D |
| Design (N) | FFS, LOS, $v_p$ | N, S, D |
| Design ($v_p$) | FFS, LOS, N | $v_p$, S, D |
| Planning (LOS) | FFS, N, AADT | LOS, S, D |
| Planning (N) | FFS, LOS, AADT | N, S, D |
| Planning ($v_p$) | FFS, LOS, N | $v_p$, S, D |

## General Information / Site Information

| General Information | | Site Information | |
|---|---|---|---|
| Analyst | *CHS* | Highway/Direction of Travel | *I-15 Northbound* |
| Agency or Company | *Urban Crossroads, Inc.* | From/To | *S of Railroad Canyon* |
| Date Performed | *4/5/2015* | Jurisdiction | *Caltrans* |
| Analysis Time Period | *Saturday Mid-Day Peak Hour* | Analysis Year | *2016 With Project* |

Project Description Lake Elsinore Walmart TIA (JN 08651)

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

## Flow Inputs

| | | | | |
|---|---|---|---|---|
| Volume, V | *4692* | veh/h | Peak-Hour Factor, PHF | *0.92* |
| AADT | | veh/day | %Trucks and Buses, $P_T$ | *10* |
| Peak-Hr Prop. of AADT, K | | | %RVs, $P_R$ | *0* |
| Peak-Hr Direction Prop, D | | | General Terrain: | *Level* |
| DDHV = AADT x K x D | | veh/h | Grade % Length | *mi* |
| Driver type adjustment | *1.00* | | Up/Down % | |

## Calculate Flow Adjustments

| | | | |
|---|---|---|---|
| $f_p$ | *1.00* | $E_R$ | *1.2* |
| $E_T$ | *1.5* | $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$ | *0.952* |

## Speed Inputs / Calc Speed Adj and FFS

| Speed Inputs | | | Calc Speed Adj and FFS | | |
|---|---|---|---|---|---|
| Lane Width | *12.0* | ft | $f_{LW}$ | | mi/h |
| Rt-Shoulder Lat. Clearance | *6.0* | ft | $f_{LC}$ | | mi/h |
| Interchange Density | *0.50* | I/mi | $f_{ID}$ | | mi/h |
| Number of Lanes, N | *3* | | $f_N$ | | mi/h |
| FFS (measured) | *70.0* | mi/h | FFS | *70.0* | mi/h |
| Base free-flow Speed, BFFS | | mi/h | | | |

## LOS and Performance Measures / Design (N)

| LOS and Performance Measures | | | Design (N) | |
|---|---|---|---|---|
| Operational (LOS) | | | Design (N) | |
| $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | *1785* | pc/h/ln | Design LOS | |
| | | | $v_p$ = (V or DDHV) / (PHF x N x $f_{HV}$ x $f_p$) | pc/h |
| S | *68.0* | mi/h | S | mi/h |
| D = $v_p$ / S | *26.2* | pc/mi/ln | D = $v_p$ / S | pc/mi/ln |
| LOS | *D* | | Required Number of Lanes, N | |

## Glossary / Factor Location

| Glossary | | Factor Location | |
|---|---|---|---|
| N - Number of lanes | S - Speed | $E_R$ - Exhibits23-8, 23-10 | $f_{LW}$ - Exhibit 23-4 |
| V - Hourly volume | D - Density | $E_T$ - Exhibits 23-8, 23-10, 23-11 | $f_{LC}$ - Exhibit 23-5 |
| $v_p$ - Flow rate | FFS - Free-flow speed | $f_p$ - Page 23-12 | $f_N$ - Exhibit 23-6 |
| LOS - Level of service | BFFS - Base free-flow speed | LOS, S, FFS, $v_p$ - Exhibits 23-2, 23-3 | $f_{ID}$ - Exhibit 23-7 |
| DDHV - Directional design hour volume | | | |

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# APPENDIX 6.9

Opening Year (2016) Without Project Conditions
Freeway Ramp Junction (Merge/Diverge) HCS+ Analysis Worksheets

# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2075 ft
$V_D$ = 257 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2996 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 3419 |
| Ramp | 261 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 288 |
| UpStream | | | | | | | | |
| DownStream | 257 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 289 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.661 using Equation (Exhibit 25-12)
$V_{12}$ = 2358 pc/h
$V_3$ or $V_{av34}$ 1061 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 3419 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3131 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 288 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2358 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 22.6 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)
$S_R$= 60.9 mph (Exhibit 25-19)
$S_0$= 76.6 mph (Exhibit 25-19)
S = 65.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 261 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2735 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 3136 |
| Ramp | 257 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 289 |
| UpStream | 261 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 288 |
| DownStream | | | | | | | | |

### Merge Areas

## Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 786.47 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 1831 pc/h

$V_3$ or $V_{av34}$ 1305 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 3425 | Exhibit 25-7 | | No |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2120 | Exhibit 25-7 | 4600:All | No |

## Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 20.4 (pc/mi/ln)

LOS = C (Exhibit 25-4)

## Speed Determination

$M_S$ = 0.333 (Exibit 25-19)

$S_R$= 60.7 mph (Exhibit 25-19)

$S_0$= 67.1 mph (Exhibit 25-19)

S = 63.0 mph (Exhibit 25-14)

### Diverge Areas

## Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

## Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

## Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2050 ft
$V_D$ = 1083 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2992 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 3415 |
| Ramp | 492 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 564 |
| UpStream | | | | | | | | |
| DownStream | 1083 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 1201 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.649 using Equation (Exhibit 25-12)
$V_{12}$ = 2413 pc/h
$V_3$ or $V_{av34}$ 1002 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 3415 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 2851 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 564 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2413 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 23.2 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.349 (Exhibit 25-19)
$S_R$= 60.2 mph (Exhibit 25-19)
$S_0$= 76.8 mph (Exhibit 25-19)
S = 64.3 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 492 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2500 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 2853 |
| Ramp | 1083 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 1201 |
| UpStream | 492 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 564 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 943.28 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 1670 pc/h

$V_3$ or $V_{av34}$ 1183 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4054 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2871 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 25.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.365 (Exibit 25-19)

$S_R$= 59.8 mph (Exhibit 25-19)

$S_0$= 67.5 mph (Exhibit 25-19)

S = 61.9 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2620 ft

$V_D$ = 337 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3583 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4070 |
| Ramp | 77 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 85 |
| UpStream | | | | | | | | |
| DownStream | 337 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 370 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.654 using Equation (Exhibit 25-12)

$V_{12}$ = 2693 pc/h

$V_3$ or $V_{av34}$ 1377 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4070 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3985 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 85 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2693 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 26.1 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.306 (Exhibit 25-19)

$S_R$= 61.4 mph (Exhibit 25-19)

$S_0$= 75.3 mph (Exhibit 25-19)

S = 65.5 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
$L_{up}$ = 2620 ft
$V_u$ = 77 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{down}$ = ft
$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3506 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 3982 |
| Ramp | 337 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 370 |
| UpStream | 77 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 85 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1015.93 (Equation 25-2 or 25-3)
$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)
$V_{12}$ = 2333 pc/h
$V_3$ or $V_{av34}$ 1649 pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4352 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2703 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.5 (pc/mi/ln)
LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.352 (Exibit 25-19)
$S_R$= 60.1 mph (Exhibit 25-19)
$S_0$= 65.9 mph (Exhibit 25-19)
S = 62.2 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = using Equation (Exhibit 25-12)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 838 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3843 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 4344 |
| Ramp | 906 | 0.92 | Level | 6 | 0 | 0.971 | 1.00 | 1014 |
| UpStream | | | | | | | | |
| DownStream | 838 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 925 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.605 using Equation (Exhibit 25-12)

$V_{12}$ = 3028 pc/h

$V_3$ or $V_{av34}$ 1316 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4344 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3330 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1014 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3028 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 28.9 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.389 (Exhibit 25-19)

$S_R$= 59.1 mph (Exhibit 25-19)

$S_0$= 75.6 mph (Exhibit 25-19)

S = 63.3 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 906 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2937 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 3336 |
| Ramp | 838 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 925 |
| UpStream | 906 | 0.92 | Level | 6 | 0 | 0.971 | 1.00 | 1014 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1076.37 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 1971 pc/h

$V_3$ or $V_{av34}$ 1365 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4261 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2896 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.348 (Exibit 25-19)

$S_R$= 60.2 mph (Exhibit 25-19)

$S_0$= 66.9 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 250 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4475 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5132 |
| Ramp | 207 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 228 |
| UpStream | 250 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 274 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1453.64 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 3079 pc/h

$V_3$ or $V_{av34}$ 2053 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5360 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3307 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.1 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.355 (Exibit 25-19)

$S_R$= 60.0 mph (Exhibit 25-19)

$S_0$= 64.4 mph (Exhibit 25-19)

S = 61.6 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2130 ft
$V_D$ = 207 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4725 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5393 |
| Ramp | 250 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 274 |
| UpStream | | | | | | | | |
| DownStream | 207 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 228 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.613 using Equation (Exhibit 25-12)
$V_{12}$ = 3410 pc/h
$V_3$ or $V_{av34}$ 1983 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5393 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5119 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 274 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3410 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.6 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.323 (Exhibit 25-19)
$S_R$= 61.0 mph (Exhibit 25-19)
$S_0$= 73.0 mph (Exhibit 25-19)
S = 64.9 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 990 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4177 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4790 |
| Ramp | 548 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 619 |
| UpStream | 990 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1087 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1415.29 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2859 pc/h

$V_3$ or $V_{av34}$ 1931 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5409 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3478 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 28.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.385 (Exibit 25-19)

$S_R$= 59.2 mph (Exhibit 25-19)

$S_0$= 64.8 mph (Exhibit 25-19)

S = 61.1 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 1650 ft
$V_D$ = 548 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5167 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5869 |
| Ramp | 990 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1087 |
| UpStream | | | | | | | | |
| DownStream | 548 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 619 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.563 using Equation (Exhibit 25-12)
$V_{12}$ = 3781 pc/h
$V_3$ or $V_{av34}$ 2088 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5869 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4782 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1087 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3781 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 35.1 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.396 (Exhibit 25-19)
$S_R$= 58.9 mph (Exhibit 25-19)
$S_0$= 72.5 mph (Exhibit 25-19)
S = 63.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 458 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5050 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5736 |
| Ramp | 117 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 130 |
| UpStream | 458 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 503 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1317.72 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3353 pc/h

$V_3$ or $V_{av34}$ 2383 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5866 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3483 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 31.0 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.425 (Exibit 25-19)

$S_R$= 58.1 mph (Exhibit 25-19)

$S_0$= 63.0 mph (Exhibit 25-19)

S = 60.0 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2100 ft
$V_D$ = 117 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5508 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6256 |
| Ramp | 458 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 503 |
| UpStream | | | | | | | | |
| DownStream | 117 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 130 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.580 using Equation (Exhibit 25-12)
$V_{12}$ = 3842 pc/h
$V_3$ or $V_{av34}$ 2414 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6256 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5753 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 503 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3842 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 35.6 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.343 (Exhibit 25-19)
$S_R$= 60.4 mph (Exhibit 25-19)
$S_0$= 71.3 mph (Exhibit 25-19)
S = 64.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 576 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3882 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4473 |
| Ramp | 1626 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1776 |
| UpStream | 576 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 642 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1413.01 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2618 pc/h

$V_3$ or $V_{av34}$ 1855 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6249 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4394 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 37.2 (pc/mi/ln)

LOS = E (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.612 (Exibit 25-19)

$S_R$= 52.9 mph (Exhibit 25-19)

$S_0$= 65.1 mph (Exhibit 25-19)

S = 56.0 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2000 ft

$V_D$ = 1626 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4458 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5112 |
| Ramp | 576 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 642 |
| UpStream | | | | | | | | |
| DownStream | 1626 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1776 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.603 using Equation (Exhibit 25-12)

$V_{12}$ = 3336 pc/h

$V_3$ or $V_{av34}$ 1776 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5112 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4470 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 642 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3336 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 30.9 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.356 (Exhibit 25-19)

$S_R$= 60.0 mph (Exhibit 25-19)

$S_0$= 73.8 mph (Exhibit 25-19)

S = 64.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2075 ft
$V_D$ = 302 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4084 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4683 |
| Ramp | 248 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 275 |
| UpStream | | | | | | | | |
| DownStream | 302 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 333 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.630 using Equation (Exhibit 25-12)
$V_{12}$ = 3053 pc/h
$V_3$ or $V_{av34}$ 1630 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4683 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4408 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 275 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3053 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 28.5 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.323 (Exhibit 25-19)
$S_R$= 61.0 mph (Exhibit 25-19)
$S_0$= 74.3 mph (Exhibit 25-19)
S = 65.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 248 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3836 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4399 |
| Ramp | 302 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 333 |
| UpStream | 248 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 275 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1066.17 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 2569 pc/h

$V_3$ or $V_{av34}$ 1830 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4732 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2902 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.5 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.371 (Exibit 25-19)

$S_R$= 59.6 mph (Exhibit 25-19)

$S_0$= 65.2 mph (Exhibit 25-19)

S = 61.7 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2050 ft
$V_D$ = 1161 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4138 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4723 |
| Ramp | 773 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 849 |
| UpStream | | | | | | | | |
| DownStream | 1161 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1268 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.603 using Equation (Exhibit 25-12)
$V_{12}$ = 3185 pc/h
$V_3$ or $V_{av34}$ 1538 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4723 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3874 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 849 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3185 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 29.9 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.374 (Exhibit 25-19)
$S_R$= 59.5 mph (Exhibit 25-19)
$S_0$= 74.7 mph (Exhibit 25-19)
S = 63.7 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 773 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3365 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3877 |
| Ramp | 1161 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1268 |
| UpStream | 773 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 849 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1176.75 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2269 pc/h

$V_3$ or $V_{av34}$ 1608 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5145 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3537 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 30.7 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.430 (Exibit 25-19)

$S_R$= 58.0 mph (Exhibit 25-19)

$S_0$= 66.0 mph (Exhibit 25-19)

S = 60.3 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2620 ft
$V_D$ = 335 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4526 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5141 |
| Ramp | 238 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 264 |
| UpStream | | | | | | | | |
| DownStream | 335 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 370 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.619 using Equation (Exhibit 25-12)
$V_{12}$ = 3284 pc/h
$V_3$ or $V_{av34}$ 1857 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5141 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4877 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 264 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3284 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.1 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.322 (Exhibit 25-19)
$S_R$= 61.0 mph (Exhibit 25-19)
$S_0$= 73.4 mph (Exhibit 25-19)
S = 65.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2620 ft

$V_u$ = 238 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4288 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4894 |
| Ramp | 335 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 370 |
| UpStream | 238 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 264 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1211.10 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)

$V_{12}$ = 2867 pc/h

$V_3$ or $V_{av34}$ 2027 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5264 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3237 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 28.7 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.393 (Exibit 25-19)

$S_R$= 59.0 mph (Exhibit 25-19)

$S_0$= 64.5 mph (Exhibit 25-19)

S = 61.0 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 618 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4623 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5251 |
| Ramp | 1392 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1528 |
| UpStream | | | | | | | | |
| DownStream | 618 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 678 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.558 using Equation (Exhibit 25-12)

$V_{12}$ = 3607 pc/h

$V_3$ or $V_{av34}$ 1644 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5251 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3723 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1528 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3607 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 33.8 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.436 (Exhibit 25-19)

$S_R$= 57.8 mph (Exhibit 25-19)

$S_0$= 74.3 mph (Exhibit 25-19)

S = 62.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 1392 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3231 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3723 |
| Ramp | 618 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 678 |
| UpStream | 1392 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1528 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1106.33 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 2200 pc/h

$V_3$ or $V_{av34}$ 1523 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4401 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2878 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.347 (Exibit 25-19)

$S_R$= 60.3 mph (Exhibit 25-19)

$S_0$= 66.3 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 282 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4604 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5280 |
| Ramp | 212 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 234 |
| UpStream | 282 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 310 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1486.60 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 3167 pc/h

$V_3$ or $V_{av34}$ 2113 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5514 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3401 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.9 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.366 (Exibit 25-19)

$S_R$= 59.8 mph (Exhibit 25-19)

$S_0$= 64.2 mph (Exhibit 25-19)

S = 61.4 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2130 ft
$V_D$ = 212 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4886 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5576 |
| Ramp | 282 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 310 |
| UpStream | | | | | | | | |
| DownStream | 212 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 234 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.606 using Equation (Exhibit 25-12)
$V_{12}$ = 3503 pc/h
$V_3$ or $V_{av34}$ 2073 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5576 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5266 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 310 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3503 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 32.4 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.326 (Exhibit 25-19)
$S_R$= 60.9 mph (Exhibit 25-19)
$S_0$= 72.6 mph (Exhibit 25-19)
S = 64.8 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 1245 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4351 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4989 |
| Ramp | 535 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 596 |
| UpStream | 1245 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1367 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1452.95 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2978 pc/h

$V_3$ or $V_{av34}$ 2011 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5585 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3574 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 28.8 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.398 (Exibit 25-19)

$S_R$= 58.9 mph (Exhibit 25-19)

$S_0$= 64.6 mph (Exhibit 25-19)

S = 60.8 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 1650 ft
$V_D$ = 535 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5596 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6356 |
| Ramp | 1245 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1367 |
| UpStream | | | | | | | | |
| DownStream | 535 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 596 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.538 using Equation (Exhibit 25-12)
$V_{12}$ = 4052 pc/h
$V_3$ or $V_{av34}$ 2304 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6356 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4989 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1367 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4052 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 37.4 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.421 (Exhibit 25-19)
$S_R$= 58.2 mph (Exhibit 25-19)
$S_0$= 71.7 mph (Exhibit 25-19)
S = 62.5 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 422 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5431 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6169 |
| Ramp | 165 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 182 |
| UpStream | 422 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 463 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1421.51 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3606 pc/h

$V_3$ or $V_{av34}$ 2563 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6351 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3788 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 33.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.471 (Exibit 25-19)

$S_R$= 56.8 mph (Exhibit 25-19)

$S_0$= 61.9 mph (Exhibit 25-19)

S = 58.8 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2100 ft
$V_D$ = 165 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5853 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6648 |
| Ramp | 422 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 463 |
| UpStream | | | | | | | | |
| DownStream | 165 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 182 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.573 using Equation (Exhibit 25-12)
$V_{12}$ = 4004 pc/h
$V_3$ or $V_{av34}$ 2644 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6648 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 6185 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 463 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4004 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 37.0 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.340 (Exhibit 25-19)
$S_R$= 60.5 mph (Exhibit 25-19)
$S_0$= 70.4 mph (Exhibit 25-19)
S = 64.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 940 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4758 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5430 |
| Ramp | 1095 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1202 |
| UpStream | 940 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1032 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1494.97 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3178 pc/h

$V_3$ or $V_{av34}$ 2252 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6632 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4380 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 37.3 (pc/mi/ln)

LOS = E (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.607 (Exibit 25-19)

$S_R$= 53.0 mph (Exhibit 25-19)

$S_0$= 63.7 mph (Exhibit 25-19)

S = 56.2 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | IA | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/2/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2000 ft

$V_D$ = 1095 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5698 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6472 |
| Ramp | 940 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1032 |
| UpStream | | | | | | | | |
| DownStream | 1095 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1202 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.551 using Equation (Exhibit 25-12)

$V_{12}$ = 4028 pc/h

$V_3$ or $V_{av34}$ 2444 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6472 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5440 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1032 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4028 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 36.9 (pc/mi/ln)

LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.391 (Exhibit 25-19)

$S_R$= 59.1 mph (Exhibit 25-19)

$S_0$= 71.2 mph (Exhibit 25-19)

S = 63.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Build |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2075 ft

$V_D$ = 284 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3605 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4134 |
| Ramp | 259 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 284 |
| UpStream | | | | | | | | |
| DownStream | 284 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 312 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.644 using Equation (Exhibit 25-12)

$V_{12}$ = 2762 pc/h

$V_3$ or $V_{av34}$ 1372 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4134 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3850 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 284 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2762 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 26.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 75.3 mph (Exhibit 25-19)

S = 65.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 259 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3346 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 3837 |
| Ramp | 284 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 312 |
| UpStream | 259 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 284 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 941.41 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 2241 pc/h

$V_3$ or $V_{av34}$ 1596 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4149 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2553 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 23.8 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.350 (Exibit 25-19)

$S_R$= 60.2 mph (Exhibit 25-19)

$S_0$= 66.1 mph (Exhibit 25-19)

S = 62.3 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2050 ft

$V_D$ = 1121 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3630 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4143 |
| Ramp | 646 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 713 |
| UpStream | | | | | | | | |
| DownStream | 1121 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1231 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.624 using Equation (Exhibit 25-12)

$V_{12}$ = 2852 pc/h

$V_3$ or $V_{av34}$ 1291 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4143 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3430 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 713 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2852 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 27.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.362 (Exhibit 25-19)

$S_R$= 59.9 mph (Exhibit 25-19)

$S_0$= 75.7 mph (Exhibit 25-19)

S = 64.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 646 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2984 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3438 |
| Ramp | 1121 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1231 |
| UpStream | 646 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 713 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1074.89 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2012 pc/h

$V_3$ or $V_{av34}$ 1426 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4669 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3243 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 28.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.396 (Exibit 25-19)

$S_R$= 58.9 mph (Exhibit 25-19)

$S_0$= 66.7 mph (Exhibit 25-19)

S = 61.1 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2620 ft

$V_D$ = 221 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4105 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 4640 |
| Ramp | 151 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 166 |
| UpStream | | | | | | | | |
| DownStream | 221 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 245 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.636 using Equation (Exhibit 25-12)

$V_{12}$ = 3013 pc/h

$V_3$ or $V_{av34}$ 1627 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4640 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4474 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 166 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3013 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 28.8 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.313 (Exhibit 25-19)

$S_R$= 61.2 mph (Exhibit 25-19)

$S_0$= 74.3 mph (Exhibit 25-19)

S = 65.3 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
$L_{up}$ = 2620 ft
$V_u$ = 151 veh/h

Terrain: Level
$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{down}$ = ft
$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3954 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4513 |
| Ramp | 221 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 245 |
| UpStream | 151 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 166 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1102.81 (Equation 25-2 or 25-3)
$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)
$V_{12}$ = 2644 pc/h
$V_3$ or $V_{av34}$ 1869 pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4758 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2889 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.0 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.364 (Exibit 25-19)
$S_R$= 59.8 mph (Exhibit 25-19)
$S_0$= 65.1 mph (Exhibit 25-19)
S = 61.8 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = using Equation (Exhibit 25-12)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 656 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4175 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4742 |
| Ramp | 1318 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1440 |
| UpStream | | | | | | | | |
| DownStream | 656 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 720 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.575 using Equation (Exhibit 25-12)

$V_{12}$ = 3339 pc/h

$V_3$ or $V_{av34}$ 1403 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4742 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3302 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1440 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3339 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.5 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.428 (Exhibit 25-19)

$S_R$= 58.0 mph (Exhibit 25-19)

$S_0$= 75.2 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 1318 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2857 | 0.92 | Level | 13 | 0 | 0.939 | 1.00 | 3307 |
| Ramp | 656 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 720 |
| UpStream | 1318 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1440 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1026.30 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 1954 pc/h

$V_3$ or $V_{av34}$ 1353 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4027 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2674 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 23.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.334 (Exibit 25-19)

$S_R$= 60.6 mph (Exhibit 25-19)

$S_0$= 66.9 mph (Exhibit 25-19)

S = 62.6 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 255 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4242 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4864 |
| Ramp | 224 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 247 |
| UpStream | 255 | 0.92 | Level | 0 | 0 | 1.000 | 1.00 | 277 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1400.35 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 2918 pc/h

$V_3$ or $V_{av34}$ 1946 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5111 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3165 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 25.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.341 (Exibit 25-19)

$S_R$= 60.4 mph (Exhibit 25-19)

$S_0$= 64.8 mph (Exhibit 25-19)

S = 62.0 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2130 ft

$V_D$ = 224 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4497 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5132 |
| Ramp | 255 | 0.92 | Level | 0 | 0 | 1.000 | 1.00 | 277 |
| UpStream | | | | | | | | |
| DownStream | 224 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 247 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.619 using Equation (Exhibit 25-12)

$V_{12}$ = 3282 pc/h

$V_3$ or $V_{av34}$ 1850 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5132 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4855 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 277 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3282 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 30.5 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.323 (Exhibit 25-19)

$S_R$= 61.0 mph (Exhibit 25-19)

$S_0$= 73.5 mph (Exhibit 25-19)

S = 64.9 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 1149 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3985 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4591 |
| Ramp | 512 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 562 |
| UpStream | 1149 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1261 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1360.50 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2740 pc/h

$V_3$ or $V_{av34}$ 1851 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5153 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3302 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.365 (Exibit 25-19)

$S_R$= 59.8 mph (Exhibit 25-19)

$S_0$= 65.1 mph (Exhibit 25-19)

S = 61.6 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 1650 ft

$V_D$ = 512 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5134 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5859 |
| Ramp | 1149 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1261 |
| UpStream | | | | | | | | |
| DownStream | 512 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 562 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.556 using Equation (Exhibit 25-12)

$V_{12}$ = 3815 pc/h

$V_3$ or $V_{av34}$ 2044 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5859 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4598 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1261 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3815 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 35.4 (pc/mi/ln)

LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.411 (Exhibit 25-19)

$S_R$= 58.5 mph (Exhibit 25-19)

$S_0$= 72.7 mph (Exhibit 25-19)

S = 62.8 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 260 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5002 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5709 |
| Ramp | 132 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 145 |
| UpStream | 260 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 285 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1315.16 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3337 pc/h

$V_3$ or $V_{av34}$ 2372 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5854 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3482 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 31.0 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.425 (Exibit 25-19)

$S_R$= 58.1 mph (Exhibit 25-19)

$S_0$= 63.0 mph (Exhibit 25-19)

S = 60.0 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2100 ft

$V_D$ = 132 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5262 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5977 |
| Ramp | 260 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 285 |
| UpStream | | | | | | | | |
| DownStream | 132 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 145 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.597 using Equation (Exhibit 25-12)

$V_{12}$ = 3686 pc/h

$V_3$ or $V_{av34}$ 2291 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5977 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5692 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 285 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3686 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 34.2 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 71.8 mph (Exhibit 25-19)

S = 64.7 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 611 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4009 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4619 |
| Ramp | 1253 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1369 |
| UpStream | 611 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 667 |
| DownStream | | | | | | | | |

### Merge Areas

## Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1357.15 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2704 pc/h

$V_3$ or $V_{av34}$ 1915 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5988 | Exhibit 25-7 | | No |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4073 | Exhibit 25-7 | 4600:All | No |

## Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 34.9 (pc/mi/ln)

LOS = D (Exhibit 25-4)

## Speed Determination

$M_S$ = 0.525 (Exibit 25-19)

$S_R$= 55.3 mph (Exhibit 25-19)

$S_0$= 64.9 mph (Exhibit 25-19)

S = 58.1 mph (Exhibit 25-14)

### Diverge Areas

## Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

## Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

## Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 No Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2000 ft

$V_D$ = 1253 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4620 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5273 |
| Ramp | 611 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 667 |
| UpStream | | | | | | | | |
| DownStream | 1253 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1369 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.597 using Equation (Exhibit 25-12)

$V_{12}$ = 3419 pc/h

$V_3$ or $V_{av34}$ 1854 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5273 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4606 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 667 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3419 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.6 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.358 (Exhibit 25-19)

$S_R$= 60.0 mph (Exhibit 25-19)

$S_0$= 73.5 mph (Exhibit 25-19)

S = 64.1 mph (Exhibit 25-15)

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# APPENDIX 6.10

Opening Year (2016) With Project Conditions
Freeway Ramp Junction (Merge/Diverge) HCS+ Analysis Worksheets

# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2075 ft
$V_D$ = 270 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3051 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 3482 |
| Ramp | 261 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 288 |
| UpStream | | | | | | | | |
| DownStream | 270 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 304 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$
$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$
$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$
$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.660 using Equation (Exhibit 25-12)
$V_{12}$ = 2395 pc/h
$V_3$ or $V_{av34}$ 1087 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 3482 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3194 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 288 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2395 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$
$D_R$ = 22.9 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)
$S_R$= 60.9 mph (Exhibit 25-19)
$S_0$= 76.5 mph (Exhibit 25-19)
S = 65.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 261 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2790 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 3199 |
| Ramp | 270 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 304 |
| UpStream | 261 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 288 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 803.16 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 1868 pc/h

$V_3$ or $V_{av34}$ 1331 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 3503 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2172 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 20.8 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.335 (Exibit 25-19)

$S_R$= 60.6 mph (Exhibit 25-19)

$S_0$= 67.0 mph (Exhibit 25-19)

S = 62.9 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2050 ft
$V_D$ = 1144 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3060 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 3492 |
| Ramp | 560 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 636 |
| UpStream | | | | | | | | |
| DownStream | 1144 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 1268 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.643 using Equation (Exhibit 25-12)
$V_{12}$ = 2474 pc/h
$V_3$ or $V_{av34}$ 1018 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 3492 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 2856 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 636 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2474 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 23.8 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.355 (Exhibit 25-19)
$S_R$= 60.1 mph (Exhibit 25-19)
$S_0$= 76.7 mph (Exhibit 25-19)
S = 64.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 560 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2500 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 2853 |
| Ramp | 1144 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 1268 |
| UpStream | 560 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 636 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 957.61 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 1670 pc/h

$V_3$ or $V_{av34}$ 1183 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4121 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2938 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.1 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.369 (Exibit 25-19)

$S_R$= 59.7 mph (Exhibit 25-19)

$S_0$= 67.5 mph (Exhibit 25-19)

S = 61.7 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2620 ft
$V_D$ = 337 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3644 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 4119 |
| Ramp | 77 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 85 |
| UpStream | | | | | | | | |
| DownStream | 337 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 370 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.653 using Equation (Exhibit 25-12)
$V_{12}$ = 2720 pc/h
$V_3$ or $V_{av34}$ 1399 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4119 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4034 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 85 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2720 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 26.3 (pc/mi/ln)
LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.306 (Exhibit 25-19)
$S_R$= 61.4 mph (Exhibit 25-19)
$S_0$= 75.2 mph (Exhibit 25-19)
S = 65.5 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2620 ft

$V_u$ = 77 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3567 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4052 |
| Ramp | 337 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 368 |
| UpStream | 77 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 85 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1030.48 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)

$V_{12}$ = 2374 pc/h

$V_3$ or $V_{av34}$ 1678 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4420 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2742 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.8 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.355 (Exibit 25-19)

$S_R$= 60.1 mph (Exhibit 25-19)

$S_0$= 65.8 mph (Exhibit 25-19)

S = 62.1 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 838 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3904 | 0.92 | Level | 8 | 0 | 0.962 | 1.00 | 4413 |
| Ramp | 937 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 1044 |
| UpStream | | | | | | | | |
| DownStream | 838 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 925 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.602 using Equation (Exhibit 25-12)

$V_{12}$ = 3071 pc/h

$V_3$ or $V_{av34}$ 1342 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4413 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3369 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1044 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3071 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 29.2 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.392 (Exhibit 25-19)

$S_R$= 59.0 mph (Exhibit 25-19)

$S_0$= 75.5 mph (Exhibit 25-19)

S = 63.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 937 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2967 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 3370 |
| Ramp | 838 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 925 |
| UpStream | 937 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 1044 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1083.65 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 1991 pc/h

$V_3$ or $V_{av34}$ 1379 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4295 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2916 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.8 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.350 (Exibit 25-19)

$S_R$= 60.2 mph (Exhibit 25-19)

$S_0$= 66.8 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 261 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4515 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5178 |
| Ramp | 207 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 228 |
| UpStream | 261 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 287 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1463.48 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 3106 pc/h

$V_3$ or $V_{av34}$ 2072 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5406 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3334 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.4 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.358 (Exibit 25-19)

$S_R$= 60.0 mph (Exhibit 25-19)

$S_0$= 64.3 mph (Exhibit 25-19)

S = 61.6 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2130 ft

$V_D$ = 207 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4776 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5451 |
| Ramp | 261 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 287 |
| UpStream | | | | | | | | |
| DownStream | 207 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 228 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.611 using Equation (Exhibit 25-12)

$V_{12}$ = 3440 pc/h

$V_3$ or $V_{av34}$ 2011 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5451 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5164 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 287 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3440 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.8 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 72.8 mph (Exhibit 25-19)

S = 64.8 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 1071 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4177 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4790 |
| Ramp | 599 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 674 |
| UpStream | 1071 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1176 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1427.06 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2859 pc/h

$V_3$ or $V_{av34}$ 1931 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5464 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3533 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 28.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.392 (Exibit 25-19)

$S_R$= 59.0 mph (Exhibit 25-19)

$S_0$= 64.8 mph (Exhibit 25-19)

S = 61.0 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 1650 ft
$V_D$ = 599 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5248 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5961 |
| Ramp | 1071 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1176 |
| UpStream | | | | | | | | |
| DownStream | 599 | 0.92 | Level | 7 | 0 | 0.966 | 1.00 | 674 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.557 using Equation (Exhibit 25-12)
$V_{12}$ = 3841 pc/h
$V_3$ or $V_{av34}$ 2120 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5961 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4785 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1176 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3841 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 35.6 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.404 (Exhibit 25-19)
$S_R$= 58.7 mph (Exhibit 25-19)
$S_0$= 72.4 mph (Exhibit 25-19)
S = 62.9 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 458 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5131 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5828 |
| Ramp | 117 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 130 |
| UpStream | 458 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 503 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1337.41 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3406 pc/h

$V_3$ or $V_{av34}$ 2422 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5958 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3536 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 31.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.432 (Exibit 25-19)

$S_R$= 57.9 mph (Exhibit 25-19)

$S_0$= 62.7 mph (Exhibit 25-19)

S = 59.8 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2100 ft
$V_D$ = 117 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5589 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6348 |
| Ramp | 458 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 503 |
| UpStream | | | | | | | | |
| DownStream | 117 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 130 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.578 using Equation (Exhibit 25-12)
$V_{12}$ = 3882 pc/h
$V_3$ or $V_{av34}$ 2466 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6348 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5845 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 503 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3882 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 35.9 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.343 (Exhibit 25-19)
$S_R$= 60.4 mph (Exhibit 25-19)
$S_0$= 71.1 mph (Exhibit 25-19)
S = 64.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 576 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3922 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4519 |
| Ramp | 1667 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1821 |
| UpStream | 576 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 642 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1432.48 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2645 pc/h

$V_3$ or $V_{av34}$ 1874 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6340 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4466 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 37.7 (pc/mi/ln)

LOS = E (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.635 (Exibit 25-19)

$S_R$= 52.2 mph (Exhibit 25-19)

$S_0$= 65.1 mph (Exhibit 25-19)

S = 55.5 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | AM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2000 ft
$V_D$ = 1667 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4498 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5158 |
| Ramp | 576 | 0.92 | Level | 5 | 0 | 0.976 | 1.00 | 642 |
| UpStream | | | | | | | | |
| DownStream | 1667 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1821 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.602 using Equation (Exhibit 25-12)
$V_{12}$ = 3358 pc/h
$V_3$ or $V_{av34}$ 1800 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5158 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4516 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 642 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3358 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.1 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.356 (Exhibit 25-19)
$S_R$= 60.0 mph (Exhibit 25-19)
$S_0$= 73.7 mph (Exhibit 25-19)
S = 64.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2075 ft
$V_D$ = 318 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4150 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4736 |
| Ramp | 248 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 275 |
| UpStream | | | | | | | | |
| DownStream | 318 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 351 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.629 using Equation (Exhibit 25-12)
$V_{12}$ = 3081 pc/h
$V_3$ or $V_{av34}$ 1655 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4736 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4461 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 275 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3081 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 28.8 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.323 (Exhibit 25-19)
$S_R$= 61.0 mph (Exhibit 25-19)
$S_0$= 74.2 mph (Exhibit 25-19)
S = 65.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 248 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3902 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4475 |
| Ramp | 318 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 351 |
| UpStream | 248 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 275 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1086.28 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 2613 pc/h

$V_3$ or $V_{av34}$ 1862 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4826 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2964 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 27.0 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.376 (Exibit 25-19)

$S_R$= 59.5 mph (Exhibit 25-19)

$S_0$= 65.1 mph (Exhibit 25-19)

S = 61.5 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2050 ft
$V_D$ = 1261 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4220 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4816 |
| Ramp | 855 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 939 |
| UpStream | | | | | | | | |
| DownStream | 1261 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1378 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.596 using Equation (Exhibit 25-12)
$V_{12}$ = 3251 pc/h
$V_3$ or $V_{av34}$ 1565 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4816 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3877 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 939 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3251 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 30.5 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.383 (Exhibit 25-19)
$S_R$= 59.3 mph (Exhibit 25-19)
$S_0$= 74.6 mph (Exhibit 25-19)
S = 63.5 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 855 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3365 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3877 |
| Ramp | 1261 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1378 |
| UpStream | 855 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 939 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1200.29 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2269 pc/h

$V_3$ or $V_{av34}$ 1608 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5255 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3647 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 31.5 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.445 (Exibit 25-19)

$S_R$= 57.5 mph (Exhibit 25-19)

$S_0$= 66.0 mph (Exhibit 25-19)

S = 59.9 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2620 ft
$V_D$ = 335 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4626 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5255 |
| Ramp | 238 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 264 |
| UpStream | | | | | | | | |
| DownStream | 335 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 370 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.616 using Equation (Exhibit 25-12)
$V_{12}$ = 3341 pc/h
$V_3$ or $V_{av34}$ 1914 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5255 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4991 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 264 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3341 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.6 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.322 (Exhibit 25-19)
$S_R$= 61.0 mph (Exhibit 25-19)
$S_0$= 73.2 mph (Exhibit 25-19)
S = 64.9 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2620 ft

$V_u$ = 238 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4388 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4984 |
| Ramp | 335 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 370 |
| UpStream | 238 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 264 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1230.36 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)

$V_{12}$ = 2920 pc/h

$V_3$ or $V_{av34}$ 2064 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5354 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3290 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 29.1 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.399 (Exibit 25-19)

$S_R$= 58.8 mph (Exhibit 25-19)

$S_0$= 64.4 mph (Exhibit 25-19)

S = 60.9 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 618 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4723 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5365 |
| Ramp | 1442 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1583 |
| UpStream | | | | | | | | |
| DownStream | 618 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 678 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.553 using Equation (Exhibit 25-12)

$V_{12}$ = 3675 pc/h

$V_3$ or $V_{av34}$ 1690 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5365 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3782 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1583 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3675 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 34.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.440 (Exhibit 25-19)

$S_R$= 57.7 mph (Exhibit 25-19)

$S_0$= 74.1 mph (Exhibit 25-19)

S = 62.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 1442 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3281 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3780 |
| Ramp | 618 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 678 |
| UpStream | 1442 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1583 |
| DownStream | | | | | | | | |

**Merge Areas**

## Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1118.53 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 2234 pc/h

$V_3$ or $V_{av34}$ 1546 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4458 | Exhibit 25-7 | | No |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2912 | Exhibit 25-7 | 4600:All | No |

## Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.9 (pc/mi/ln)

LOS = C (Exhibit 25-4)

## Speed Determination

$M_S$ = 0.350 (Exibit 25-19)

$S_R$= 60.2 mph (Exhibit 25-19)

$S_0$= 66.2 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-14)

**Diverge Areas**

## Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

## Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

## Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 299 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4670 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 5355 |
| Ramp | 212 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 234 |
| UpStream | 299 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 328 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1502.65 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 3212 pc/h

$V_3$ or $V_{av34}$ 2143 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5589 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3446 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 27.2 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.371 (Exibit 25-19)

$S_R$= 59.6 mph (Exhibit 25-19)

$S_0$= 64.1 mph (Exhibit 25-19)

S = 61.2 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2130 ft
$V_D$ = 212 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4969 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5671 |
| Ramp | 299 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 328 |
| UpStream | | | | | | | | |
| DownStream | 212 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 234 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.603 using Equation (Exhibit 25-12)
$V_{12}$ = 3551 pc/h
$V_3$ or $V_{av34}$ 2120 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5671 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5343 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 328 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3551 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 32.8 (pc/mi/ln)
LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.328 (Exhibit 25-19)
$S_R$= 60.8 mph (Exhibit 25-19)
$S_0$= 72.4 mph (Exhibit 25-19)
S = 64.7 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 1344 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4351 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4989 |
| Ramp | 618 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 685 |
| UpStream | 1344 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1475 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1472.00 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2978 pc/h

$V_3$ or $V_{av34}$ 2011 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5674 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3663 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 29.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.411 (Exibit 25-19)

$S_R$= 58.5 mph (Exhibit 25-19)

$S_0$= 64.6 mph (Exhibit 25-19)

S = 60.5 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 1650 ft
$V_D$ = 618 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5695 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6469 |
| Ramp | 1344 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1475 |
| UpStream | | | | | | | | |
| DownStream | 618 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 685 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.530 using Equation (Exhibit 25-12)
$V_{12}$ = 4124 pc/h
$V_3$ or $V_{av34}$ 2345 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6469 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4994 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1475 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4124 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 38.0 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.431 (Exhibit 25-19)
$S_R$= 57.9 mph (Exhibit 25-19)
$S_0$= 71.5 mph (Exhibit 25-19)
S = 62.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 422 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5530 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6281 |
| Ramp | 165 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 182 |
| UpStream | 422 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 463 |
| DownStream | | | | | | | | |

**Merge Areas**

## Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1445.48 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3671 pc/h

$V_3$ or $V_{av34}$ 2610 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6463 | Exhibit 25-7 | | No |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3853 | Exhibit 25-7 | 4600:All | No |

## Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 33.9 (pc/mi/ln)

LOS = D (Exhibit 25-4)

## Speed Determination

$M_S$ = 0.482 (Exibit 25-19)

$S_R$= 56.5 mph (Exhibit 25-19)

$S_0$= 61.6 mph (Exhibit 25-19)

S = 58.5 mph (Exhibit 25-14)

**Diverge Areas**

## Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

## Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

## Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

## Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

## Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2100 ft
$V_D$ = 165 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5952 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6761 |
| Ramp | 422 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 463 |
| UpStream | | | | | | | | |
| DownStream | 165 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 182 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.570 using Equation (Exhibit 25-12)
$V_{12}$ = 4051 pc/h
$V_3$ or $V_{av34}$ 2710 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☑ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = 4061 pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6761 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 6298 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 463 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4051 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 37.5 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.340 (Exhibit 25-19)
$S_R$= 60.5 mph (Exhibit 25-19)
$S_0$= 70.2 mph (Exhibit 25-19)
S = 64.0 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 940 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4807 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5486 |
| Ramp | 1145 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1257 |
| UpStream | 940 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1032 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1518.72 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3211 pc/h

$V_3$ or $V_{av34}$ 2275 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6743 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4468 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 38.0 (pc/mi/ln)

LOS = E (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.636 (Exibit 25-19)

$S_R$= 52.2 mph (Exhibit 25-19)

$S_0$= 63.6 mph (Exhibit 25-19)

S = 55.6 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | PM Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 2000 ft
$V_D$ = 1145 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5747 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6528 |
| Ramp | 940 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1032 |
| UpStream | | | | | | | | |
| DownStream | 1145 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1257 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.549 using Equation (Exhibit 25-12)
$V_{12}$ = 4051 pc/h
$V_3$ or $V_{av34}$ 2477 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6528 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5496 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1032 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 4051 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 37.1 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.391 (Exhibit 25-19)
$S_R$= 59.1 mph (Exhibit 25-19)
$S_0$= 71.0 mph (Exhibit 25-19)
S = 63.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Build |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2075 ft

$V_D$ = 308 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3701 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4224 |
| Ramp | 259 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 284 |
| UpStream | | | | | | | | |
| DownStream | 308 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 336 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.641 using Equation (Exhibit 25-12)

$V_{12}$ = 2811 pc/h

$V_3$ or $V_{av34}$ 1413 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4224 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3940 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 284 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2811 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 26.4 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 75.2 mph (Exhibit 25-19)

S = 65.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2075 ft

$V_u$ = 259 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3442 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 3947 |
| Ramp | 308 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 336 |
| UpStream | 259 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 284 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 970.08 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.584 using Equation (Exhibit 25-5)

$V_{12}$ = 2305 pc/h

$V_3$ or $V_{av34}$ 1642 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4283 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2641 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 24.5 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.355 (Exibit 25-19)

$S_R$= 60.1 mph (Exhibit 25-19)

$S_0$= 65.9 mph (Exhibit 25-19)

S = 62.2 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2050 ft

$V_D$ = 1265 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3750 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 4280 |
| Ramp | 766 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 841 |
| UpStream | | | | | | | | |
| DownStream | 1265 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1389 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.614 using Equation (Exhibit 25-12)

$V_{12}$ = 2954 pc/h

$V_3$ or $V_{av34}$ 1326 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4280 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3439 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 841 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 2954 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 27.9 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.374 (Exhibit 25-19)

$S_R$= 59.5 mph (Exhibit 25-19)

$S_0$= 75.5 mph (Exhibit 25-19)

S = 63.7 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2050 ft

$V_u$ = 766 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | v = V/PHF x $f_{HV}$ x $f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2984 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 3438 |
| Ramp | 1265 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1389 |
| UpStream | 766 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 841 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1108.70 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2012 pc/h

$V_3$ or $V_{av34}$ 1426 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4827 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3401 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 29.6 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.413 (Exibit 25-19)

$S_R$= 58.4 mph (Exhibit 25-19)

$S_0$= 66.7 mph (Exhibit 25-19)

S = 60.7 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2620 ft

$V_D$ = 221 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4249 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4826 |
| Ramp | 151 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 166 |
| UpStream | | | | | | | | |
| DownStream | 221 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 245 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.632 using Equation (Exhibit 25-12)

$V_{12}$ = 3110 pc/h

$V_3$ or $V_{av34}$ 1716 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4826 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4660 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 166 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3110 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 29.6 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.313 (Exhibit 25-19)

$S_R$= 61.2 mph (Exhibit 25-19)

$S_0$= 74.0 mph (Exhibit 25-19)

S = 65.2 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2620 ft

$V_u$ = 151 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4098 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4655 |
| Ramp | 221 | 0.92 | Level | 4 | 0 | 0.980 | 1.00 | 245 |
| UpStream | 151 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 166 |
| DownStream | | | | | | | | |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1133.20 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.586 using Equation (Exhibit 25-5)

$V_{12}$ = 2727 pc/h

$V_3$ or $V_{av34}$ 1928 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4900 | Exhibit 25-7 | | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2972 | Exhibit 25-7 | 4600:All | No |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 26.7 (pc/mi/ln)

LOS = C (Exhibit 25-4)

### Speed Determination

$M_S$ = 0.370 (Exibit 25-19)

$S_R$= 59.6 mph (Exhibit 25-19)

$S_0$= 64.9 mph (Exhibit 25-19)

S = 61.6 mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2250 ft

$V_D$ = 656 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4319 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 4906 |
| Ramp | 1390 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1518 |
| UpStream | | | | | | | | |
| DownStream | 656 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 720 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.568 using Equation (Exhibit 25-12)

$V_{12}$ = 3441 pc/h

$V_3$ or $V_{av34}$ 1465 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 4906 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 3388 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1518 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3441 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 32.4 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.435 (Exhibit 25-19)

$S_R$= 57.8 mph (Exhibit 25-19)

$S_0$= 75.0 mph (Exhibit 25-19)

S = 62.1 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Southbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2250 ft

$V_u$ = 1390 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 2929 | 0.92 | Level | 13 | 0 | 0.939 | 1.00 | 3391 |
| Ramp | 656 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 720 |
| UpStream | 1390 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1518 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1044.27 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.591 using Equation (Exhibit 25-5)

$V_{12}$ = 2004 pc/h

$V_3$ or $V_{av34}$ 1387 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 4111 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 2724 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 23.4 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.337 (Exibit 25-19)

$S_R$= 60.6 mph (Exhibit 25-19)

$S_0$= 66.8 mph (Exhibit 25-19)

S = 62.5 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2130 ft

$V_u$ = 279 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4338 | 0.92 | Level | 11 | 0 | 0.948 | 1.00 | 4975 |
| Ramp | 224 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 247 |
| UpStream | 279 | 0.92 | Level | 0 | 0 | 1.000 | 1.00 | 303 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1424.11 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.600 using Equation (Exhibit 25-5)

$V_{12}$ = 2985 pc/h

$V_3$ or $V_{av34}$ 1990 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5222 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3232 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 25.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.348 (Exibit 25-19)

$S_R$= 60.3 mph (Exhibit 25-19)

$S_0$= 64.6 mph (Exhibit 25-19)

S = 61.9 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Nichols Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2130 ft

$V_D$ = 224 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4617 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5269 |
| Ramp | 279 | 0.92 | Level | 0 | 0 | 1.000 | 1.00 | 303 |
| UpStream | | | | | | | | |
| DownStream | 224 | 0.92 | Level | 3 | 0 | 0.985 | 1.00 | 247 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.614 using Equation (Exhibit 25-12)

$V_{12}$ = 3354 pc/h

$V_3$ or $V_{av34}$ 1915 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5269 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4966 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 303 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3354 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 31.1 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.325 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 73.2 mph (Exhibit 25-19)

S = 64.9 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 1650 ft

$V_u$ = 1293 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 3985 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4591 |
| Ramp | 632 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 694 |
| UpStream | 1293 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1419 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1388.75 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.597 using Equation (Exhibit 25-5)

$V_{12}$ = 2740 pc/h

$V_3$ or $V_{av34}$ 1851 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5285 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3434 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 27.6 (pc/mi/ln)

LOS = C (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.380 (Exibit 25-19)

$S_R$= 59.4 mph (Exhibit 25-19)

$S_0$= 65.1 mph (Exhibit 25-19)

S = 61.3 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Central Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
$L_{up}$ = ft
$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph
Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
$L_{down}$ = 1650 ft
$V_D$ = 632 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5278 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5995 |
| Ramp | 1293 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 1419 |
| UpStream | | | | | | | | |
| DownStream | 632 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 694 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)
$P_{FM}$ = using Equation (Exhibit 25-5)
$V_{12}$ = pc/h
$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No
If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)
LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)
$S_R$= mph (Exhibit 25-19)
$S_0$= mph (Exhibit 25-19)
S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)
$P_{FD}$ = 0.545 using Equation (Exhibit 25-12)
$V_{12}$ = 3912 pc/h
$V_3$ or $V_{av34}$ 2083 pc/h (Equation 25-15 or 25-16)
Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No
Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No
If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5995 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4576 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 1419 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3912 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 36.2 (pc/mi/ln)
LOS = E (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.426 (Exhibit 25-19)
$S_R$= 58.1 mph (Exhibit 25-19)
$S_0$= 72.6 mph (Exhibit 25-19)
S = 62.4 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2100 ft

$V_u$ = 260 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5146 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 5845 |
| Ramp | 132 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 145 |
| UpStream | 260 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 285 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1344.26 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 3416 pc/h

$V_3$ or $V_{av34}$ 2429 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 5990 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 3561 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 31.6 (pc/mi/ln)

LOS = D (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.436 (Exibit 25-19)

$S_R$= 57.8 mph (Exhibit 25-19)

$S_0$= 62.7 mph (Exhibit 25-19)

S = 59.7 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Main Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2100 ft

$V_D$ = 132 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 5406 | 0.92 | Level | 9 | 0 | 0.957 | 1.00 | 6141 |
| Ramp | 260 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 285 |
| UpStream | | | | | | | | |
| DownStream | 132 | 0.92 | Level | 2 | 0 | 0.990 | 1.00 | 145 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.593 using Equation (Exhibit 25-12)

$V_{12}$ = 3760 pc/h

$V_3$ or $V_{av34}$ 2381 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 6141 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 5856 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 285 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3760 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 34.9 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.324 (Exhibit 25-19)

$S_R$= 60.9 mph (Exhibit 25-19)

$S_0$= 71.4 mph (Exhibit 25-19)

S = 64.6 mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon On-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

$L_{up}$ = 2000 ft

$V_u$ = 611 veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

$L_{down}$ = ft

$V_D$ = veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4081 | 0.92 | Level | 12 | 0 | 0.943 | 1.00 | 4702 |
| Ramp | 1325 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1447 |
| UpStream | 611 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 667 |
| DownStream | | | | | | | | |

### Merge Areas

#### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = 1391.61 (Equation 25-2 or 25-3)

$P_{FM}$ = 0.585 using Equation (Exhibit 25-5)

$V_{12}$ = 2752 pc/h

$V_3$ or $V_{av34}$ 1950 pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | 6149 | Exhibit 25-7 | | No |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | 4199 | Exhibit 25-7 | 4600:All | No |

#### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = 35.8 (pc/mi/ln)

LOS = E (Exhibit 25-4)

#### Speed Determination

$M_S$ = 0.556 (Exibit 25-19)

$S_R$= 54.4 mph (Exhibit 25-19)

$S_0$= 64.8 mph (Exhibit 25-19)

S = 57.3 mph (Exhibit 25-14)

### Diverge Areas

#### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = using Equation (Exhibit 25-12)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

#### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | | Exhibit 25-14 | | |
| $V_{FO} = V_F - V_R$ | | Exhibit 25-14 | | |
| $V_R$ | | Exhibit 25-3 | | |

#### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | | Exhibit 25-14 | | |

#### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

#### Speed Determination

$D_s$ = (Exhibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-15)

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# RAMPS AND RAMP JUNCTIONS WORKSHEET

## General Information / Site Information

| | | | |
|---|---|---|---|
| Analyst | CHS | Freeway/Dir of Travel | I-15 Northbound |
| Agency or Company | Urban Crossroads, Inc. | Junction | Railroad Canyon Off-Ramp |
| Date Performed | 4/5/2015 | Jurisdiction | Caltrans |
| Analysis Time Period | Saturday Mid-Day Peak Hour | Analysis Year | 2016 With Project |

Project Description Lake Elsinore Walmart TIA (JN 08651)

## Inputs

Upstream Adj Ramp
- ☐ Yes ☐ On
- ☑ No ☐ Off

$L_{up}$ = ft

$V_u$ = veh/h

Terrain: Level

$S_{FF}$ = 70.0 mph $S_{FR}$ = 45.0 mph

Sketch ( show lanes, $L_A$, $L_D$, $V_R$, $V_f$)

Downstream Adj Ramp
- ☑ Yes ☑ On
- ☐ No ☐ Off

$L_{down}$ = 2000 ft

$V_D$ = 1325 veh/h

## Conversion to pc/h Under Base Conditions

| (pc/h) | V (Veh/hr) | PHF | Terrain | %Truck | %Rv | $f_{HV}$ | $f_p$ | $v = V/PHF \times f_{HV} \times f_p$ |
|---|---|---|---|---|---|---|---|---|
| Freeway | 4692 | 0.92 | Level | 10 | 0 | 0.952 | 1.00 | 5355 |
| Ramp | 611 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 667 |
| UpStream | | | | | | | | |
| DownStream | 1325 | 0.92 | Level | 1 | 0 | 0.995 | 1.00 | 1447 |

## Merge Areas

### Estimation of $v_{12}$

$V_{12} = V_F ( P_{FM} )$

$L_{EQ}$ = (Equation 25-2 or 25-3)

$P_{FM}$ = using Equation (Exhibit 25-5)

$V_{12}$ = pc/h

$V_3$ or $V_{av34}$ pc/h (Equation 25-4 or 25-5)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☐ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☐ No

If Yes, $V_{12a}$ = pc/h (Equation 25-8)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_{FO}$ | | Exhibit 25-7 | | |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{R12}$ | | Exhibit 25-7 | | |

### Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, V_{12} - 0.00627\, L_A$

$D_R$ = (pc/mi/ln)

LOS = (Exhibit 25-4)

### Speed Determination

$M_S$ = (Exibit 25-19)

$S_R$= mph (Exhibit 25-19)

$S_0$= mph (Exhibit 25-19)

S = mph (Exhibit 25-14)

## Diverge Areas

### Estimation of $v_{12}$

$V_{12} = V_R + (V_F - V_R)P_{FD}$

$L_{EQ}$ = (Equation 25-8 or 25-9)

$P_{FD}$ = 0.595 using Equation (Exhibit 25-12)

$V_{12}$ = 3458 pc/h

$V_3$ or $V_{av34}$ 1897 pc/h (Equation 25-15 or 25-16)

Is $V_3$ or $V_{av34}$ > 2,700 pc/h? ☐ Yes ☑ No

Is $V_3$ or $V_{av34}$ > 1.5 * $V_{12}$/2 ☐ Yes ☑ No

If Yes, $V_{12a}$ = pc/h (Equation 25-18)

### Capacity Checks

| | Actual | Capacity | | LOS F? |
|---|---|---|---|---|
| $V_F$ | 5355 | Exhibit 25-14 | 7200 | No |
| $V_{FO} = V_F - V_R$ | 4688 | Exhibit 25-14 | 7200 | No |
| $V_R$ | 667 | Exhibit 25-3 | 2100 | No |

### Flow Entering Merge Influence Area

| | Actual | Max Desirable | | Violation? |
|---|---|---|---|---|
| $V_{12}$ | 3458 | Exhibit 25-14 | 4400:All | No |

### Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\, V_{12} - 0.0009\, L_D$

$D_R$ = 32.0 (pc/mi/ln)

LOS = D (Exhibit 25-4)

### Speed Determination

$D_s$ = 0.358 (Exhibit 25-19)

$S_R$= 60.0 mph (Exhibit 25-19)

$S_0$= 73.3 mph (Exhibit 25-19)

S = 64.1 mph (Exhibit 25-15)

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# APPENDIX 6.11

Opening Year (2016) Without Project Conditions
Intersection Operations Analysis Worksheets, with Improvements

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 115 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 16 Average Delay (sec/veh): 41.1
Optimal Cycle: OPTIMIZED Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Added Vol: | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 111 | 2 | 2 | 42 | 2 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 185 | 153 | 19 | 254 | 241 | 107 | 147 | 675 | 293 | 37 | 516 | 131 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 195 | 161 | 20 | 267 | 254 | 113 | 155 | 711 | 308 | 39 | 543 | 138 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 161 | 20 | 267 | 254 | 113 | 155 | 711 | 308 | 39 | 543 | 138 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 161 | 20 | 267 | 254 | 113 | 155 | 711 | 308 | 39 | 543 | 138 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.93 | 0.93 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.78 | 0.22 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 3160 | 392 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.05 | 0.05 | 0.15 | 0.07 | 0.07 | 0.09 | 0.20 | 0.19 | 0.02 | 0.15 | 0.09 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.29 | 0.29 | 0.19 | 0.35 | 0.35 | 0.11 | 0.29 | 0.29 | 0.09 | 0.27 | 0.27 |
| Volume/Cap: | 0.82 | 0.18 | 0.18 | 0.77 | 0.20 | 0.20 | 0.77 | 0.68 | 0.66 | 0.23 | 0.56 | 0.32 |
| Delay/Veh: | 68.9 | 30.9 | 30.9 | 53.9 | 26.3 | 26.4 | 65.9 | 38.2 | 39.6 | 49.1 | 36.8 | 34.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 68.9 | 30.9 | 30.9 | 53.9 | 26.3 | 26.4 | 65.9 | 38.2 | 39.6 | 49.1 | 36.8 | 34.0 |
| LOS by Move: | E | C | C | D | C | C | E | D | D | D | D | C |
| HCM2kAvgQ: | 9 | 3 | 3 | 11 | 3 | 3 | 7 | 13 | 10 | 1 | 9 | 4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to URBAN CROSSROADS, IRVINE

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 33 | 74 | 8 | 315 | 166 | 200 | 23 | 236 | 254 | 159 | 216 | 47 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.92 | | 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) | 1805 | 5099 | | 3072 | 3285 | | 1805 | 3610 | 1431 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5099 | | 3072 | 3285 | | 1805 | 3610 | 1431 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Adj. Flow (vph) | 39 | 88 | 10 | 375 | 198 | 238 | 27 | 281 | 302 | 189 | 257 | 56 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| Lane Group Flow (vph) | 39 | 92 | 0 | 375 | 333 | 0 | 27 | 281 | 302 | 189 | 257 | 11 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 12% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 4.4 | 47.8 | | 24.9 | 68.3 | | 3.8 | 20.8 | 45.7 | 5.5 | 22.5 | 22.5 |
| Effective Green, g (s) | 4.4 | 47.8 | | 24.9 | 68.3 | | 3.8 | 20.8 | 45.7 | 5.5 | 22.5 | 22.5 |
| Actuated g/C Ratio | 0.04 | 0.40 | | 0.21 | 0.57 | | 0.03 | 0.17 | 0.38 | 0.05 | 0.19 | 0.19 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 66 | 2031 | | 637 | 1869 | | 57 | 625 | 544 | 160 | 676 | 297 |
| v/s Ratio Prot | 0.02 | 0.02 | | c0.12 | c0.10 | | 0.01 | 0.08 | c0.11 | c0.05 | 0.07 | |
| v/s Ratio Perm | | | | | | | | | 0.10 | | | 0.01 |
| v/c Ratio | 0.59 | 0.05 | | 0.59 | 0.18 | | 0.47 | 0.45 | 0.56 | 1.18 | 0.38 | 0.04 |
| Uniform Delay, d1 | 56.9 | 22.1 | | 42.9 | 12.4 | | 57.1 | 44.5 | 29.2 | 57.2 | 42.6 | 39.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 9.1 | 0.0 | | 0.9 | 0.2 | | 2.3 | 0.2 | 0.7 | 128.2 | 0.1 | 0.0 |
| Delay (s) | 66.0 | 22.2 | | 43.8 | 12.6 | | 59.4 | 44.7 | 29.9 | 185.5 | 42.8 | 39.9 |
| Level of Service | E | C | | D | B | | E | D | C | F | D | D |
| Approach Delay (s) | | 34.6 | | | 27.0 | | | 38.0 | | | 96.2 | |
| Approach LOS | | C | | | C | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 47.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 66.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 12 Average Delay (sec/veh): 11.9
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 30 | 30 | 10 | 30 | 30 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 | 0 | 0 | 45 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 946 | 11 | 3 | 659 | 38 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 1 | 3 | 18 | 43 | 3 | 8 | 5 | 982 | 11 | 3 | 684 | 39 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1 | 3 | 18 | 43 | 3 | 8 | 5 | 982 | 11 | 3 | 684 | 39 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1 | 3 | 18 | 43 | 3 | 8 | 5 | 982 | 11 | 3 | 684 | 39 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.96 | 0.96 | 0.85 | 0.74 | 0.74 | 0.85 | 0.95 | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 |
| Lanes: | 0.25 | 0.75 | 1.00 | 0.93 | 0.07 | 1.00 | 1.00 | 1.98 | 0.02 | 1.00 | 1.89 | 0.11 |
| Final Sat.: | 458 | 1374 | 1615 | 1312 | 96 | 1615 | 1805 | 3561 | 41 | 1805 | 3386 | 195 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.01 | 0.03 | 0.03 | 0.01 | 0.00 | 0.28 | 0.28 | 0.00 | 0.20 | 0.20 |
| Crit Moves: | | | | | **** | | | **** | | **** | | |
| Green/Cycle: | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.19 | 0.69 | 0.69 | 0.08 | 0.58 | 0.58 |
| Volume/Cap: | 0.02 | 0.02 | 0.09 | 0.26 | 0.26 | 0.04 | 0.01 | 0.40 | 0.40 | 0.02 | 0.35 | 0.35 |
| Delay/Veh: | 46.1 | 46.1 | 46.6 | 48.3 | 48.3 | 46.3 | 39.1 | 8.0 | 8.0 | 50.6 | 13.3 | 13.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.1 | 46.1 | 46.6 | 48.3 | 48.3 | 46.3 | 39.1 | 8.0 | 8.0 | 50.6 | 13.3 | 13.3 |
| LOS by Move: | D | D | D | D | D | D | D | A | A | D | B | B |
| HCM2kAvgQ: | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 8 | 8 | 0 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 516 | 209 | 627 | 649 | 0 | 0 | 0 | 0 | 583 | 2 | 321 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.96 | | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4758 | | 1770 | 3505 | | | | | 3335 | 1398 | 1395 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4758 | | 1770 | 3505 | | | | | 3335 | 1398 | 1395 |
| Peak-hour factor, PHF | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 0 | 629 | 255 | 765 | 791 | 0 | 0 | 0 | 0 | 711 | 2 | 391 |
| RTOR Reduction (vph) | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 150 |
| Lane Group Flow (vph) | 0 | 823 | 0 | 765 | 791 | 0 | 0 | 0 | 0 | 711 | 48 | 46 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 5% | 2% | 3% | 0% | 0% | 0% | 0% | 5% | 0% | 8% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 22.4 | | 54.4 | 81.4 | | | | | 28.0 | 28.0 | 28.0 |
| Effective Green, g (s) | | 22.4 | | 54.4 | 81.4 | | | | | 28.0 | 28.0 | 28.0 |
| Actuated g/C Ratio | | 0.19 | | 0.45 | 0.68 | | | | | 0.23 | 0.23 | 0.23 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 888 | | 802 | 2377 | | | | | 778 | 326 | 325 |
| v/s Ratio Prot | | c0.17 | | c0.43 | 0.23 | | | | | c0.21 | 0.03 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.03 |
| v/c Ratio | | 0.93 | | 0.95 | 0.33 | | | | | 0.91 | 0.15 | 0.14 |
| Uniform Delay, d1 | | 48.0 | | 31.6 | 8.0 | | | | | 44.8 | 36.5 | 36.5 |
| Progression Factor | | 1.00 | | 0.74 | 0.77 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 16.9 | | 15.1 | 0.3 | | | | | 14.9 | 0.1 | 0.1 |
| Delay (s) | | 64.9 | | 38.6 | 6.5 | | | | | 59.7 | 36.6 | 36.5 |
| Level of Service | | E | | D | A | | | | | E | D | D |
| Approach Delay (s) | | 64.9 | | | 22.3 | | | 0.0 | | | 51.5 | |
| Approach LOS | | E | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 42.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 82.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 99 | 368 | 0 | 0 | 147 | 108 | 116 | 0 | 134 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 0.99 | | | 0.99 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.94 | | | 0.93 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.98 | | | | |
| Satd. Flow (prot) | 1671 | 1881 | | | 1700 | | | 1667 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.98 | | | | |
| Satd. Flow (perm) | 1671 | 1881 | | | 1700 | | | 1667 | | | | |
| Peak-hour factor, PHF | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Adj. Flow (vph) | 141 | 526 | 0 | 0 | 210 | 154 | 166 | 0 | 191 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 141 | 526 | 0 | 0 | 339 | 0 | 0 | 307 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 8% | 1% | 0% | 0% | 6% | 1% | 4% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.6 | 55.7 | | | 38.5 | | | 33.7 | | | | |
| Effective Green, g (s) | 12.6 | 55.7 | | | 38.5 | | | 33.7 | | | | |
| Actuated g/C Ratio | 0.13 | 0.56 | | | 0.38 | | | 0.34 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 210 | 1047 | | | 654 | | | 561 | | | | |
| v/s Ratio Prot | c0.08 | c0.28 | | | 0.20 | | | c0.18 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.50 | | | 0.52 | | | 0.55 | | | | |
| Uniform Delay, d1 | 41.7 | 13.6 | | | 23.6 | | | 27.0 | | | | |
| Progression Factor | 1.21 | 0.76 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 6.0 | 1.6 | | | 2.9 | | | 3.8 | | | | |
| Delay (s) | 56.7 | 12.0 | | | 26.6 | | | 30.8 | | | | |
| Level of Service | E | B | | | C | | | C | | | | |
| Approach Delay (s) | | 21.4 | | | 26.6 | | | 30.8 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 48.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 113 | 103 | 0 | 0 | 173 | 4 | 356 | 0 | 102 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1719 | 1863 | | | 1818 | | | 1728 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1719 | 1863 | | | 1818 | | | 1728 | | | | |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 136 | 124 | 0 | 0 | 208 | 5 | 429 | 0 | 123 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 136 | 124 | 0 | 0 | 212 | 0 | 0 | 512 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 5% | 2% | 0% | 0% | 3% | 50% | 3% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 11.6 | 42.7 | | | 26.5 | | | 46.7 | | | | |
| Effective Green, g (s) | 11.6 | 42.7 | | | 26.5 | | | 46.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.43 | | | 0.26 | | | 0.47 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 199 | 795 | | | 481 | | | 806 | | | | |
| v/s Ratio Prot | c0.08 | 0.07 | | | c0.12 | | | c0.30 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.68 | 0.16 | | | 0.44 | | | 0.64 | | | | |
| Uniform Delay, d1 | 42.4 | 17.6 | | | 30.6 | | | 20.2 | | | | |
| Progression Factor | 0.74 | 0.41 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 7.4 | 0.4 | | | 2.9 | | | 3.8 | | | | |
| Delay (s) | 38.7 | 7.6 | | | 33.5 | | | 24.0 | | | | |
| Level of Service | D | A | | | C | | | C | | | | |
| Approach Delay (s) | | 23.9 | | | 33.5 | | | 24.0 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.58 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 60.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 256 | 843 | 0 | 0 | 1079 | 1368 | 197 | 2 | 377 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.95 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 4988 | | | 3251 | 1470 | 1559 | 1567 | 2760 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 4988 | | | 3251 | 1470 | 1559 | 1567 | 2760 | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 291 | 958 | 0 | 0 | 1226 | 1555 | 224 | 2 | 428 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 49 | 234 | 0 | 0 | 319 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 291 | 958 | 0 | 0 | 1861 | 637 | 112 | 114 | 109 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 4% | 0% | 0% | 1% | 0% | 10% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 96.0 | | | 76.0 | 76.0 | 13.4 | 13.4 | 13.4 | | | |
| Effective Green, g (s) | 15.4 | 96.0 | | | 76.0 | 76.0 | 13.4 | 13.4 | 13.4 | | | |
| Actuated g/C Ratio | 0.13 | 0.80 | | | 0.63 | 0.63 | 0.11 | 0.11 | 0.11 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 423 | 3990 | | | 2058 | 931 | 174 | 174 | 308 | | | |
| v/s Ratio Prot | c0.09 | 0.19 | | | c0.57 | | 0.07 | c0.07 | | | | |
| v/s Ratio Perm | | | | | | 0.43 | | | 0.04 | | | |
| v/c Ratio | 0.69 | 0.24 | | | 0.90 | 0.68 | 0.64 | 0.66 | 0.35 | | | |
| Uniform Delay, d1 | 50.0 | 3.0 | | | 18.9 | 14.2 | 51.0 | 51.1 | 49.3 | | | |
| Progression Factor | 1.65 | 2.02 | | | 1.75 | 4.12 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 3.4 | 0.1 | | | 4.0 | 2.2 | 6.0 | 6.6 | 0.3 | | | |
| Delay (s) | 85.8 | 6.1 | | | 37.1 | 60.9 | 57.0 | 57.7 | 49.6 | | | |
| Level of Service | F | A | | | D | E | E | E | D | | | |
| Approach Delay (s) | | 24.6 | | | 44.5 | | | 52.2 | | | 0.0 | |
| Approach LOS | | C | | | D | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.84 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 82.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 194 | 807 | 220 | 191 | 1625 | 84 | 292 | 57 | 152 | 168 | 84 | 530 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | *1.00 | 1.00 | 0.97 | *1.00 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.98 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.89 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5377 | 1601 | 3502 | 5600 | | 3502 | 3610 | 1594 | 1805 | 2999 | 1453 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5377 | 1601 | 3502 | 5600 | | 3502 | 3610 | 1594 | 1805 | 2999 | 1453 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 213 | 887 | 242 | 210 | 1786 | 92 | 321 | 63 | 167 | 185 | 92 | 582 |
| RTOR Reduction (vph) | 0 | 0 | 62 | 0 | 5 | 0 | 0 | 0 | 49 | 0 | 227 | 124 |
| Lane Group Flow (vph) | 213 | 887 | 180 | 210 | 1873 | 0 | 321 | 63 | 118 | 185 | 156 | 167 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 8.9 | 38.6 | 77.1 | 10.9 | 40.6 | | 38.5 | 37.0 | 47.9 | 12.5 | 11.0 | 19.9 |
| Effective Green, g (s) | 8.9 | 38.6 | 77.1 | 10.9 | 40.6 | | 38.5 | 37.0 | 47.9 | 12.5 | 11.0 | 19.9 |
| Actuated g/C Ratio | 0.07 | 0.32 | 0.64 | 0.09 | 0.34 | | 0.32 | 0.31 | 0.40 | 0.10 | 0.09 | 0.17 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 259 | 1729 | 1028 | 318 | 1894 | | 1123 | 1113 | 636 | 188 | 274 | 240 |
| v/s Ratio Prot | c0.06 | 0.16 | 0.06 | 0.06 | c0.33 | | c0.09 | 0.02 | 0.02 | c0.10 | 0.05 | 0.05 |
| v/s Ratio Perm | | | 0.06 | | | | | | 0.06 | | | 0.06 |
| v/c Ratio | 0.82 | 0.51 | 0.17 | 0.66 | 0.99 | | 0.29 | 0.06 | 0.19 | 0.98 | 0.57 | 0.69 |
| Uniform Delay, d1 | 54.8 | 33.1 | 8.6 | 52.8 | 39.5 | | 30.5 | 29.2 | 23.4 | 53.7 | 52.2 | 47.2 |
| Progression Factor | 0.98 | 1.16 | 0.68 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 17.1 | 1.0 | 0.4 | 3.9 | 18.2 | | 0.6 | 0.1 | 0.1 | 60.4 | 1.6 | 6.9 |
| Delay (s) | 70.9 | 39.3 | 6.2 | 56.7 | 57.7 | | 31.1 | 29.3 | 23.4 | 114.1 | 53.8 | 54.0 |
| Level of Service | E | D | A | E | E | | C | C | C | F | D | D |
| Approach Delay (s) | | 38.4 | | | 57.6 | | | 28.6 | | | 66.9 | |
| Approach LOS | | D | | | E | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 50.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 96.5% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 115 | Critical Vol./Cap.(X): | 0.700 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 45.0 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Added Vol: | 3 | 0 | 2 | 2 | 0 | 3 | 3 | 78 | 3 | 1 | 123 | 1 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 231 | 349 | 25 | 226 | 271 | 211 | 171 | 864 | 267 | 58 | 710 | 338 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 247 | 374 | 27 | 242 | 290 | 226 | 183 | 925 | 286 | 62 | 760 | 362 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 247 | 374 | 27 | 242 | 290 | 226 | 183 | 925 | 286 | 62 | 760 | 362 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 247 | 374 | 27 | 242 | 290 | 226 | 183 | 925 | 286 | 62 | 760 | 362 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.87 | 0.13 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 3335 | 239 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.11 | 0.11 | 0.13 | 0.08 | 0.14 | 0.10 | 0.26 | 0.18 | 0.03 | 0.21 | 0.22 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.17 | 0.31 | 0.31 | 0.15 | 0.29 | 0.29 | 0.13 | 0.31 | 0.31 | 0.10 | 0.28 | 0.28 |
| Volume/Cap: | 0.81 | 0.36 | 0.36 | 0.92 | 0.28 | 0.49 | 0.81 | 0.84 | 0.58 | 0.35 | 0.76 | 0.81 |
| Delay/Veh: | 60.3 | 30.9 | 30.9 | 83.7 | 31.9 | 34.8 | 67.6 | 43.2 | 35.4 | 49.6 | 41.3 | 48.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 60.3 | 30.9 | 30.9 | 83.7 | 31.9 | 34.8 | 67.6 | 43.2 | 35.4 | 49.6 | 41.3 | 48.9 |
| LOS by Move: | E | C | C | F | C | C | E | D | D | D | D | D |
| HCM2kAvgQ: | 11 | 6 | 6 | 12 | 4 | 7 | 8 | 18 | 9 | 2 | 14 | 14 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 74 | 136 | 15 | 443 | 175 | 257 | 26 | 400 | 331 | 235 | 385 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.91 | | 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) | 1805 | 5102 | | 3367 | 3256 | | 1805 | 3610 | 1511 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5102 | | 3367 | 3256 | | 1805 | 3610 | 1511 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 75 | 137 | 15 | 447 | 177 | 260 | 26 | 404 | 334 | 237 | 389 | 52 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| Lane Group Flow (vph) | 75 | 142 | 0 | 447 | 290 | 0 | 26 | 404 | 334 | 237 | 389 | 14 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 7.4 | 39.2 | | 20.4 | 52.2 | | 7.6 | 22.1 | 42.5 | 17.3 | 31.8 | 31.8 |
| Effective Green, g (s) | 7.4 | 39.2 | | 20.4 | 52.2 | | 7.6 | 22.1 | 42.5 | 17.3 | 31.8 | 31.8 |
| Actuated g/C Ratio | 0.06 | 0.33 | | 0.17 | 0.44 | | 0.06 | 0.18 | 0.35 | 0.14 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 111 | 1666 | | 572 | 1416 | | 114 | 664 | 535 | 504 | 956 | 421 |
| v/s Ratio Prot | 0.04 | 0.03 | | c0.13 | c0.09 | | 0.01 | 0.11 | c0.11 | c0.07 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | 0.11 | | | 0.01 |
| v/c Ratio | 0.68 | 0.09 | | 0.78 | 0.20 | | 0.23 | 0.61 | 0.62 | 0.47 | 0.41 | 0.03 |
| Uniform Delay, d1 | 55.1 | 28.0 | | 47.7 | 21.0 | | 53.4 | 45.0 | 32.1 | 47.1 | 36.3 | 32.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 12.0 | 0.1 | | 6.3 | 0.3 | | 0.4 | 1.1 | 1.6 | 0.3 | 0.1 | 0.0 |
| Delay (s) | 67.2 | 28.1 | | 54.0 | 21.4 | | 53.8 | 46.1 | 33.8 | 47.4 | 36.4 | 32.7 |
| Level of Service | E | C | | D | C | | D | D | C | D | D | C |
| Approach Delay (s) | | 41.0 | | | 37.9 | | | 41.0 | | | 40.0 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.47 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 85.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.419
Loss Time (sec): 12 Average Delay (sec/veh): 12.1
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - | R | L | - T | - | R | L | - T | - | R | L | - T | - | R |
| Control: | Permitted | | | | Permitted | | | | Protected | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 15 | 15 | 15 | | 15 | 15 | 15 | | 10 | 30 | 30 | | 10 | 30 | 30 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 10 | | 33 | 2 | | 7 | | 6 | 1028 | 6 | | 7 | 968 | 104 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 10 | | 33 | 2 | | 7 | | 6 | 1028 | 6 | | 7 | 968 | 104 |
| Added Vol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 81 | 0 | | 0 | 124 | 0 |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Initial Fut: | 2 | 2 | 10 | | 33 | 2 | | 7 | | 6 | 1109 | 6 | | 7 | 1092 | 104 |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | | 0.96 | 0.96 | | 0.96 | | 0.96 | 0.96 | 0.96 | | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 2 | 2 | 10 | | 34 | 2 | | 7 | | 6 | 1150 | 6 | | 7 | 1133 | 108 |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 10 | | 34 | 2 | | 7 | | 6 | 1150 | 6 | | 7 | 1133 | 108 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 10 | | 34 | 2 | | 7 | | 6 | 1150 | 6 | | 7 | 1133 | 108 |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.85 | | 0.76 | 0.76 | | 0.85 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.94 | 0.94 |
| Lanes: | 0.50 | 0.50 | 1.00 | | 0.94 | 0.06 | | 1.00 | | 1.00 | 1.99 | 0.01 | | 1.00 | 1.83 | 0.17 |
| Final Sat.: | 882 | 882 | 1615 | | 1353 | 82 | | 1615 | | 1805 | 3587 | 19 | | 1805 | 3253 | 310 |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.01 | | 0.03 | 0.03 | | 0.00 | | 0.00 | 0.32 | 0.32 | | 0.00 | 0.35 | 0.35 |
| Crit Moves: | | | | | | **** | | | | **** | | | | | **** | |
| Green/Cycle: | 0.13 | 0.13 | 0.13 | | 0.13 | 0.13 | | 0.13 | | 0.08 | 0.62 | 0.62 | | 0.16 | 0.69 | 0.69 |
| Volume/Cap: | 0.02 | 0.02 | 0.05 | | 0.20 | 0.20 | | 0.04 | | 0.04 | 0.52 | 0.52 | | 0.03 | 0.50 | 0.50 |
| Delay/Veh: | 46.1 | 46.1 | 46.3 | | 47.7 | 47.7 | | 46.2 | | 50.7 | 13.3 | 13.3 | | 42.6 | 8.9 | 8.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.1 | 46.1 | 46.3 | | 47.7 | 47.7 | | 46.2 | | 50.7 | 13.3 | 13.3 | | 42.6 | 8.9 | 8.9 |
| LOS by Move: | D | D | D | | D | D | | D | | D | B | B | | D | A | A |
| HCM2kAvgQ: | 0 | 0 | 0 | | 1 | 1 | | 0 | | 0 | 13 | 13 | | 0 | 11 | 11 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to URBAN CROSSROADS, IRVINE

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 706 | 184 | 428 | 745 | 0 | 0 | 0 | 0 | 1007 | 6 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.97 | | 1.00 | 1.00 | | | | | 1.00 | 0.86 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4899 | | 1770 | 3574 | | | | | 3467 | 1490 | 1480 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4899 | | 1770 | 3574 | | | | | 3467 | 1490 | 1480 |
| 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) | 0 | 767 | 200 | 465 | 810 | 0 | 0 | 0 | 0 | 1095 | 7 | 412 |
| RTOR Reduction (vph) | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 106 | 106 |
| Lane Group Flow (vph) | 0 | 929 | 0 | 465 | 810 | 0 | 0 | 0 | 0 | 1095 | 103 | 104 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 1% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 2% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 26.1 | | 37.4 | 68.1 | | | | | 41.3 | 41.3 | 41.3 |
| Effective Green, g (s) | | 26.1 | | 37.4 | 68.1 | | | | | 41.3 | 41.3 | 41.3 |
| Actuated g/C Ratio | | 0.22 | | 0.31 | 0.57 | | | | | 0.34 | 0.34 | 0.34 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1065 | | 551 | 2028 | | | | | 1193 | 512 | 509 |
| v/s Ratio Prot | | c0.19 | | c0.26 | 0.23 | | | | | c0.32 | 0.07 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.07 |
| v/c Ratio | | 0.87 | | 0.84 | 0.40 | | | | | 0.92 | 0.20 | 0.21 |
| Uniform Delay, d1 | | 45.3 | | 38.6 | 14.5 | | | | | 37.7 | 27.7 | 27.8 |
| Progression Factor | | 1.00 | | 0.90 | 0.81 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 9.8 | | 9.2 | 0.5 | | | | | 10.9 | 0.1 | 0.1 |
| Delay (s) | | 55.2 | | 43.9 | 12.2 | | | | | 48.6 | 27.8 | 27.8 |
| Level of Service | | E | | D | B | | | | | D | C | C |
| Approach Delay (s) | | 55.2 | | | 23.8 | | | 0.0 | | | 42.9 | |
| Approach LOS | | E | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 82.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 186 | 140 | 0 | 0 | 119 | 26 | 254 | 0 | 28 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 0.99 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.99 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1736 | 1863 | | | 1813 | | | 1757 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1736 | 1863 | | | 1813 | | | 1757 | | | | |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Adj. Flow (vph) | 221 | 167 | 0 | 0 | 142 | 31 | 302 | 0 | 33 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 221 | 167 | 0 | 0 | 166 | 0 | 0 | 288 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 4% | 2% | 0% | 0% | 2% | 0% | 2% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 52.7 | | | 31.1 | | | 36.7 | | | | |
| Effective Green, g (s) | 17.0 | 52.7 | | | 31.1 | | | 36.7 | | | | |
| Actuated g/C Ratio | 0.17 | 0.53 | | | 0.31 | | | 0.37 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 295 | 981 | | | 563 | | | 644 | | | | |
| v/s Ratio Prot | c0.13 | 0.09 | | | c0.09 | | | c0.16 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.75 | 0.17 | | | 0.30 | | | 0.45 | | | | |
| Uniform Delay, d1 | 39.5 | 12.3 | | | 26.1 | | | 24.0 | | | | |
| Progression Factor | 0.64 | 0.91 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 8.4 | 0.4 | | | 1.3 | | | 2.2 | | | | |
| Delay (s) | 33.7 | 11.5 | | | 27.5 | | | 26.2 | | | | |
| Level of Service | C | B | | | C | | | C | | | | |
| Approach Delay (s) | | 24.2 | | | 27.5 | | | 26.2 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 54.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 133 | 161 | 0 | 0 | 187 | 32 | 292 | 0 | 130 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.96 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (prot) | 1719 | 1881 | | | 1823 | | | 1716 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (perm) | 1719 | 1881 | | | 1823 | | | 1716 | | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 151 | 183 | 0 | 0 | 212 | 36 | 332 | 0 | 148 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 151 | 183 | 0 | 0 | 242 | 0 | 0 | 436 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 5% | 1% | 0% | 0% | 2% | 0% | 3% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.5 | 47.7 | | | 30.6 | | | 41.7 | | | | |
| Effective Green, g (s) | 12.5 | 47.7 | | | 30.6 | | | 41.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.48 | | | 0.31 | | | 0.42 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 214 | 897 | | | 557 | | | 715 | | | | |
| v/s Ratio Prot | c0.09 | 0.10 | | | c0.13 | | | c0.25 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.71 | 0.20 | | | 0.44 | | | 0.61 | | | | |
| Uniform Delay, d1 | 42.0 | 15.2 | | | 27.8 | | | 22.8 | | | | |
| Progression Factor | 1.69 | 0.42 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 8.0 | 0.5 | | | 2.5 | | | 3.9 | | | | |
| Delay (s) | 79.2 | 6.9 | | | 30.2 | | | 26.7 | | | | |
| Level of Service | E | A | | | C | | | C | | | | |
| Approach Delay (s) | | 39.6 | | | 30.2 | | | 26.7 | | | 0.0 | |
| Approach LOS | | D | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 60.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 307 | 1406 | 0 | 0 | 892 | 785 | 281 | 3 | 656 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.97 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 5136 | | | 3305 | 1455 | 1665 | 1672 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 5136 | | | 3305 | 1455 | 1665 | 1672 | 2814 | | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 323 | 1480 | 0 | 0 | 939 | 826 | 296 | 3 | 691 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 22 | 228 | 0 | 0 | 115 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 323 | 1480 | 0 | 0 | 1198 | 317 | 148 | 151 | 576 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 1% | 0% | 0% | 1% | 1% | 3% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | 19.7 | 19.7 | 19.7 | | | |
| Effective Green, g (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | 19.7 | 19.7 | 19.7 | | | |
| Actuated g/C Ratio | 0.13 | 0.75 | | | 0.58 | 0.58 | 0.16 | 0.16 | 0.16 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 423 | 3839 | | | 1919 | 845 | 273 | 274 | 461 | | | |
| v/s Ratio Prot | c0.10 | 0.29 | | | c0.36 | | 0.09 | 0.09 | | | | |
| v/s Ratio Perm | | | | | | 0.22 | | | c0.20 | | | |
| v/c Ratio | 0.76 | 0.39 | | | 0.62 | 0.37 | 0.54 | 0.55 | 1.25 | | | |
| Uniform Delay, d1 | 50.5 | 5.4 | | | 16.5 | 13.5 | 46.0 | 46.1 | 50.1 | | | |
| Progression Factor | 1.71 | 1.12 | | | 1.03 | 5.24 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 6.0 | 0.1 | | | 1.1 | 0.9 | 1.2 | 1.4 | 128.9 | | | |
| Delay (s) | 92.5 | 6.1 | | | 18.1 | 71.5 | 47.2 | 47.4 | 179.1 | | | |
| Level of Service | F | A | | | B | E | D | D | F | | | |
| Approach Delay (s) | | 21.6 | | | 34.6 | | | 139.3 | | | 0.0 | |
| Approach LOS | | C | | | C | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 52.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 82.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 400 | 1274 | 430 | 169 | 924 | 73 | 375 | 160 | 287 | 223 | 182 | 378 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5085 | 1601 | 3502 | 5030 | | 3502 | 3610 | 1593 | 1805 | 3150 | 1457 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5085 | 1601 | 3502 | 5030 | | 3502 | 3610 | 1593 | 1805 | 3150 | 1457 |
| Peak-hour factor, PHF | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 460 | 1464 | 494 | 194 | 1062 | 84 | 431 | 184 | 330 | 256 | 209 | 434 |
| RTOR Reduction (vph) | 0 | 0 | 24 | 0 | 7 | 0 | 0 | 0 | 67 | 0 | 158 | 85 |
| Lane Group Flow (vph) | 460 | 1464 | 470 | 194 | 1139 | 0 | 431 | 184 | 263 | 256 | 268 | 132 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 14.5 | 39.5 | 78.0 | 9.0 | 34.0 | | 38.5 | 37.0 | 46.0 | 13.5 | 12.0 | 26.5 |
| Effective Green, g (s) | 14.5 | 39.5 | 78.0 | 9.0 | 34.0 | | 38.5 | 37.0 | 46.0 | 13.5 | 12.0 | 26.5 |
| Actuated g/C Ratio | 0.12 | 0.33 | 0.65 | 0.08 | 0.28 | | 0.32 | 0.31 | 0.38 | 0.11 | 0.10 | 0.22 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 423 | 1673 | 1040 | 262 | 1425 | | 1123 | 1113 | 610 | 203 | 315 | 321 |
| v/s Ratio Prot | c0.13 | c0.29 | c0.14 | 0.06 | 0.23 | | 0.12 | 0.05 | 0.03 | c0.14 | c0.08 | 0.05 |
| v/s Ratio Perm | | | 0.15 | | | | | | 0.13 | | | 0.04 |
| v/c Ratio | 1.09 | 0.88 | 0.45 | 0.74 | 0.80 | | 0.38 | 0.17 | 0.43 | 1.26 | 0.85 | 0.41 |
| Uniform Delay, d1 | 52.8 | 37.9 | 10.4 | 54.4 | 39.8 | | 31.6 | 30.2 | 27.3 | 53.2 | 53.1 | 40.1 |
| Progression Factor | 0.98 | 0.80 | 1.45 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 65.5 | 5.6 | 1.2 | 9.4 | 4.8 | | 1.0 | 0.3 | 0.2 | 150.8 | 18.1 | 0.3 |
| Delay (s) | 117.1 | 36.1 | 16.3 | 63.8 | 44.6 | | 32.6 | 30.6 | 27.5 | 204.1 | 71.2 | 40.4 |
| Level of Service | F | D | B | E | D | | C | C | C | F | E | D |
| Approach Delay (s) | | 47.5 | | | 47.4 | | | 30.4 | | | 101.6 | |
| Approach LOS | | D | | | D | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 53.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.86 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 99.6% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 115 | Critical Vol./Cap.(X): | 0.620 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 42.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Added Vol: | 4 | 0 | 2 | 2 | 0 | 4 | 4 | 95 | 4 | 1 | 103 | 1 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 189 | 239 | 52 | 262 | 248 | 184 | 178 | 726 | 235 | 69 | 697 | 275 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 194 | 246 | 53 | 269 | 255 | 189 | 183 | 746 | 242 | 71 | 716 | 283 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 194 | 246 | 53 | 269 | 255 | 189 | 183 | 746 | 242 | 71 | 716 | 283 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 194 | 246 | 53 | 269 | 255 | 189 | 183 | 746 | 242 | 71 | 716 | 283 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.64 | 0.36 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 2885 | 628 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.09 | 0.09 | 0.15 | 0.07 | 0.12 | 0.10 | 0.21 | 0.15 | 0.04 | 0.20 | 0.18 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.29 | 0.29 | 0.18 | 0.34 | 0.34 | 0.12 | 0.30 | 0.30 | 0.10 | 0.27 | 0.27 |
| Volume/Cap: | 0.84 | 0.30 | 0.30 | 0.82 | 0.21 | 0.34 | 0.82 | 0.70 | 0.50 | 0.41 | 0.74 | 0.65 |
| Delay/Veh: | 72.5 | 32.1 | 32.1 | 60.7 | 27.0 | 28.7 | 70.5 | 37.9 | 34.3 | 50.5 | 41.2 | 40.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 72.5 | 32.1 | 32.1 | 60.7 | 27.0 | 28.7 | 70.5 | 37.9 | 34.3 | 50.5 | 41.2 | 40.6 |
| LOS by Move: | E | C | C | E | C | C | E | D | C | D | D | D |
| HCM2kAvgQ: | 9 | 4 | 4 | 11 | 3 | 5 | 9 | 13 | 7 | 3 | 13 | 10 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 66 | 145 | 11 | 471 | 104 | 264 | 27 | 339 | 474 | 259 | 284 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.89 | | 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) | 1805 | 5124 | | 3433 | 3183 | | 1805 | 3610 | 1540 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5124 | | 3433 | 3183 | | 1805 | 3610 | 1540 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 69 | 153 | 12 | 496 | 109 | 278 | 28 | 357 | 499 | 273 | 299 | 39 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 69 | 158 | 0 | 496 | 228 | 0 | 28 | 357 | 499 | 273 | 299 | 10 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 7.0 | 39.2 | | 19.1 | 51.3 | | 8.9 | 20.8 | 39.9 | 19.9 | 31.8 | 31.8 |
| Effective Green, g (s) | 7.0 | 39.2 | | 19.1 | 51.3 | | 8.9 | 20.8 | 39.9 | 19.9 | 31.8 | 31.8 |
| Actuated g/C Ratio | 0.06 | 0.33 | | 0.16 | 0.43 | | 0.07 | 0.17 | 0.33 | 0.17 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 105 | 1673 | | 546 | 1360 | | 133 | 625 | 512 | 580 | 956 | 421 |
| v/s Ratio Prot | 0.04 | 0.03 | | 0.14 | c0.07 | | 0.02 | 0.10 | c0.16 | c0.08 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | 0.17 | | | 0.01 |
| v/c Ratio | 0.66 | 0.09 | | 0.91 | 0.17 | | 0.21 | 0.57 | 0.97 | 0.47 | 0.31 | 0.02 |
| Uniform Delay, d1 | 55.3 | 28.1 | | 49.6 | 21.2 | | 52.2 | 45.5 | 39.5 | 45.3 | 35.3 | 32.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.8 | 0.1 | | 18.5 | 0.3 | | 0.3 | 0.8 | 32.9 | 0.2 | 0.1 | 0.0 |
| Delay (s) | 66.1 | 28.2 | | 68.1 | 21.4 | | 52.5 | 46.3 | 72.5 | 45.5 | 35.4 | 32.6 |
| Level of Service | E | C | | E | C | | D | D | E | D | D | C |
| Approach Delay (s) | | 39.4 | | | 47.7 | | | 61.3 | | | 39.7 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 49.7 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) Without Project Conditions WITH IMPROVEMENTS
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 0.411 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 12.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | B |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Permitted | | | | Permitted | | | | Protected | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 15 | 15 | 15 | | 15 | 15 | 15 | | 10 | 30 | 30 | | 10 | 30 | 30 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | |
| Base Vol: | 37 | 0 | 17 | | 14 | 0 | 8 | | 8 | 915 | 74 | | 12 | 996 | 14 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 37 | 0 | 17 | | 14 | 0 | 8 | | 8 | 915 | 74 | | 12 | 996 | 14 | |
| Added Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 98 | 0 | | 0 | 106 | 0 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 37 | 0 | 17 | | 14 | 0 | 8 | | 8 | 1013 | 74 | | 12 | 1102 | 14 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | |
| PHF Volume: | 40 | 0 | 18 | | 15 | 0 | 9 | | 9 | 1100 | 80 | | 13 | 1197 | 15 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 40 | 0 | 18 | | 15 | 0 | 9 | | 9 | 1100 | 80 | | 13 | 1197 | 15 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 40 | 0 | 18 | | 15 | 0 | 9 | | 9 | 1100 | 80 | | 13 | 1197 | 15 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | |
| Adjustment: | 0.72 | 1.00 | 0.85 | | 0.78 | 1.00 | 0.85 | | 0.95 | 0.94 | 0.94 | | 0.95 | 0.95 | 0.95 | |
| Lanes: | 1.00 | 0.00 | 1.00 | | 1.00 | 0.00 | 1.00 | | 1.00 | 1.86 | 0.14 | | 1.00 | 1.97 | 0.03 | |
| Final Sat.: | 1376 | 0 | 1615 | | 1490 | 0 | 1615 | | 1805 | 3331 | 243 | | 1805 | 3558 | 45 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.01 | | 0.01 | 0.00 | 0.01 | | 0.00 | 0.33 | 0.33 | | 0.01 | 0.34 | 0.34 | |
| Crit Moves: | **** | | | | | | | | **** | | | | | **** | | |
| Green/Cycle: | 0.13 | 0.00 | 0.13 | | 0.13 | 0.00 | 0.13 | | 0.08 | 0.62 | 0.62 | | 0.16 | 0.69 | 0.69 | |
| Volume/Cap: | 0.23 | 0.00 | 0.09 | | 0.08 | 0.00 | 0.04 | | 0.06 | 0.53 | 0.53 | | 0.05 | 0.49 | 0.49 | |
| Delay/Veh: | 48.0 | 0.0 | 46.7 | | 46.6 | 0.0 | 46.3 | | 50.8 | 13.3 | 13.3 | | 43.1 | 8.7 | 8.7 | |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 48.0 | 0.0 | 46.7 | | 46.6 | 0.0 | 46.3 | | 50.8 | 13.3 | 13.3 | | 43.1 | 8.7 | 8.7 | |
| LOS by Move: | D | A | D | | D | A | D | | D | B | B | | D | A | A | |
| HCM2kAvgQ: | 2 | 0 | 1 | | 1 | 0 | 0 | | 0 | 13 | 13 | | 0 | 11 | 11 | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 889 | 240 | 414 | 762 | 0 | 0 | 0 | 0 | 934 | 2 | 382 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.97 | | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4961 | | 1770 | 3574 | | | | | 3467 | 1497 | 1494 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4961 | | 1770 | 3574 | | | | | 3467 | 1497 | 1494 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 907 | 245 | 422 | 778 | 0 | 0 | 0 | 0 | 953 | 2 | 390 |
| RTOR Reduction (vph) | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 134 |
| Lane Group Flow (vph) | 0 | 1114 | 0 | 422 | 778 | 0 | 0 | 0 | 0 | 953 | 63 | 61 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 36.5 | | 31.6 | 72.7 | | | | | 36.7 | 36.7 | 36.7 |
| Effective Green, g (s) | | 36.5 | | 31.6 | 72.7 | | | | | 36.7 | 36.7 | 36.7 |
| Actuated g/C Ratio | | 0.30 | | 0.26 | 0.61 | | | | | 0.31 | 0.31 | 0.31 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1508 | | 466 | 2165 | | | | | 1060 | 457 | 456 |
| v/s Ratio Prot | | c0.22 | | c0.24 | 0.22 | | | | | c0.27 | 0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.04 |
| v/c Ratio | | 0.74 | | 0.91 | 0.36 | | | | | 0.90 | 0.14 | 0.13 |
| Uniform Delay, d1 | | 37.5 | | 42.8 | 11.9 | | | | | 39.9 | 30.2 | 30.1 |
| Progression Factor | | 1.00 | | 1.60 | 0.81 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 3.3 | | 16.1 | 0.4 | | | | | 10.0 | 0.1 | 0.0 |
| Delay (s) | | 40.7 | | 84.6 | 10.0 | | | | | 49.8 | 30.2 | 30.2 |
| Level of Service | | D | | F | A | | | | | D | C | C |
| Approach Delay (s) | | 40.7 | | | 36.2 | | | 0.0 | | | 44.1 | |
| Approach LOS | | D | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.84 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 84.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 205 | 113 | 0 | 0 | 109 | 19 | 239 | 0 | 16 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.99 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1805 | 1827 | | | 1832 | | | 1797 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1805 | 1827 | | | 1832 | | | 1797 | | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 209 | 115 | 0 | 0 | 111 | 19 | 244 | 0 | 16 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 209 | 115 | 0 | 0 | 125 | 0 | 0 | 211 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 0% | 4% | 5% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 15.9 | 54.7 | | | 34.2 | | | 34.7 | | | | |
| Effective Green, g (s) | 15.9 | 54.7 | | | 34.2 | | | 34.7 | | | | |
| Actuated g/C Ratio | 0.16 | 0.55 | | | 0.34 | | | 0.35 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 286 | 999 | | | 626 | | | 623 | | | | |
| v/s Ratio Prot | c0.12 | 0.06 | | | c0.07 | | | c0.12 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.73 | 0.12 | | | 0.20 | | | 0.34 | | | | |
| Uniform Delay, d1 | 40.0 | 10.9 | | | 23.2 | | | 24.2 | | | | |
| Progression Factor | 0.66 | 1.11 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 7.7 | 0.2 | | | 0.7 | | | 1.5 | | | | |
| Delay (s) | 34.2 | 12.4 | | | 23.9 | | | 25.6 | | | | |
| Level of Service | C | B | | | C | | | C | | | | |
| Approach Delay (s) | | 26.4 | | | 23.9 | | | 25.6 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 54.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 130 | 139 | 0 | 0 | 142 | 2 | 168 | 0 | 92 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 0.99 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | | | 0.95 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (prot) | 1770 | 1881 | | | 1877 | | | 1704 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (perm) | 1770 | 1881 | | | 1877 | | | 1704 | | | | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 140 | 149 | 0 | 0 | 153 | 2 | 181 | 0 | 99 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 140 | 149 | 0 | 0 | 154 | 0 | 0 | 232 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 2% | 1% | 0% | 0% | 1% | 0% | 3% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.3 | 53.7 | | | 36.8 | | | 35.7 | | | | |
| Effective Green, g (s) | 12.3 | 53.7 | | | 36.8 | | | 35.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.54 | | | 0.37 | | | 0.36 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 217 | 1010 | | | 690 | | | 608 | | | | |
| v/s Ratio Prot | c0.08 | 0.08 | | | c0.08 | | | c0.14 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.65 | 0.15 | | | 0.22 | | | 0.38 | | | | |
| Uniform Delay, d1 | 41.8 | 11.6 | | | 21.8 | | | 23.9 | | | | |
| Progression Factor | 1.62 | 0.59 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 4.8 | 0.3 | | | 0.8 | | | 1.8 | | | | |
| Delay (s) | 72.6 | 7.2 | | | 22.5 | | | 25.7 | | | | |
| Level of Service | E | A | | | C | | | C | | | | |
| Approach Delay (s) | | 38.9 | | | 22.5 | | | 25.7 | | | 0.0 | |
| Approach LOS | | D | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.35 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 50.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 335 | 1488 | 0 | 0 | 1009 | 914 | 167 | 4 | 440 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.96 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3467 | 5136 | | | 3300 | 1455 | 1698 | 1707 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3467 | 5136 | | | 3300 | 1455 | 1698 | 1707 | 2814 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 342 | 1518 | 0 | 0 | 1030 | 933 | 170 | 4 | 449 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 22 | 242 | 0 | 0 | 109 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 342 | 1518 | 0 | 0 | 1335 | 364 | 87 | 87 | 340 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 92.0 | | | 72.0 | 72.0 | 17.4 | 17.4 | 17.4 | | | |
| Effective Green, g (s) | 15.4 | 92.0 | | | 72.0 | 72.0 | 17.4 | 17.4 | 17.4 | | | |
| Actuated g/C Ratio | 0.13 | 0.77 | | | 0.60 | 0.60 | 0.14 | 0.14 | 0.14 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 444 | 3937 | | | 1980 | 873 | 246 | 247 | 408 | | | |
| v/s Ratio Prot | c0.10 | 0.30 | | | c0.40 | | 0.05 | 0.05 | | | | |
| v/s Ratio Perm | | | | | | 0.25 | | | c0.12 | | | |
| v/c Ratio | 0.77 | 0.39 | | | 0.67 | 0.42 | 0.35 | 0.35 | 0.83 | | | |
| Uniform Delay, d1 | 50.6 | 4.6 | | | 16.1 | 12.8 | 46.2 | 46.2 | 49.9 | | | |
| Progression Factor | 0.89 | 0.60 | | | 0.94 | 5.51 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 8.2 | 0.2 | | | 1.3 | 1.0 | 0.3 | 0.3 | 13.0 | | | |
| Delay (s) | 53.4 | 2.9 | | | 16.5 | 71.5 | 46.6 | 46.5 | 62.8 | | | |
| Level of Service | D | A | | | B | E | D | D | E | | | |
| Approach Delay (s) | | 12.2 | | | 33.5 | | | 58.3 | | | 0.0 | |
| Approach LOS | | B | | | C | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 84.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 364 | 1066 | 499 | 221 | 1073 | 105 | 467 | 174 | 264 | 138 | 159 | 383 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.98 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5085 | 1602 | 3502 | 4974 | | 3502 | 3610 | 1594 | 1805 | 3125 | 1458 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5085 | 1602 | 3502 | 4974 | | 3502 | 3610 | 1594 | 1805 | 3125 | 1458 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 371 | 1088 | 509 | 226 | 1095 | 107 | 477 | 178 | 269 | 141 | 162 | 391 |
| RTOR Reduction (vph) | 0 | 0 | 29 | 0 | 9 | 0 | 0 | 0 | 40 | 0 | 178 | 85 |
| Lane Group Flow (vph) | 371 | 1088 | 480 | 226 | 1193 | 0 | 477 | 178 | 229 | 141 | 180 | 110 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 15.2 | 37.9 | 76.4 | 11.6 | 34.3 | | 38.5 | 37.8 | 49.4 | 11.7 | 11.0 | 26.2 |
| Effective Green, g (s) | 15.2 | 37.9 | 76.4 | 11.6 | 34.3 | | 38.5 | 37.8 | 49.4 | 11.7 | 11.0 | 26.2 |
| Actuated g/C Ratio | 0.13 | 0.32 | 0.64 | 0.10 | 0.29 | | 0.32 | 0.31 | 0.41 | 0.10 | 0.09 | 0.22 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 443 | 1606 | 1019 | 338 | 1421 | | 1123 | 1137 | 656 | 175 | 286 | 318 |
| v/s Ratio Prot | c0.11 | c0.21 | c0.15 | 0.06 | c0.24 | | 0.14 | 0.05 | 0.03 | c0.08 | c0.06 | 0.04 |
| v/s Ratio Perm | | | 0.15 | | | | | | 0.11 | | | 0.03 |
| v/c Ratio | 0.84 | 0.68 | 0.47 | 0.67 | 0.84 | | 0.42 | 0.16 | 0.35 | 0.81 | 0.63 | 0.35 |
| Uniform Delay, d1 | 51.2 | 35.7 | 11.3 | 52.3 | 40.3 | | 32.0 | 29.6 | 24.3 | 53.0 | 52.5 | 39.6 |
| Progression Factor | 0.86 | 0.86 | 1.31 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 11.2 | 2.1 | 1.4 | 3.9 | 6.1 | | 1.2 | 0.3 | 0.1 | 21.8 | 3.1 | 0.2 |
| Delay (s) | 55.3 | 32.7 | 16.2 | 56.2 | 46.4 | | 33.2 | 29.9 | 24.4 | 74.9 | 55.6 | 39.9 |
| Level of Service | E | C | B | E | D | | C | C | C | E | E | D |
| Approach Delay (s) | | 32.7 | | | 47.9 | | | 30.0 | | | 55.1 | |
| Approach LOS | | C | | | D | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 93.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# APPENDIX 6.12

Opening Year (2016) With Project Conditions
Intersection Operations Analysis Worksheets, with Improvements

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 115 | Critical Vol./Cap.(X): | 0.519 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 41.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 183 | 153 | 17 | 252 | 241 | 105 | 145 | 564 | 291 | 35 | 474 | 129 |
| Added Vol: | 2 | 0 | 12 | 12 | 0 | 2 | 2 | 122 | 2 | 10 | 49 | 10 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 185 | 153 | 29 | 264 | 241 | 107 | 147 | 686 | 293 | 45 | 523 | 139 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 195 | 161 | 31 | 278 | 254 | 113 | 155 | 722 | 308 | 47 | 551 | 146 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.93 | 0.93 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.68 | 0.32 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 2962 | 561 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.05 | 0.05 | 0.15 | 0.07 | 0.07 | 0.09 | 0.20 | 0.19 | 0.03 | 0.15 | 0.09 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.29 | 0.29 | 0.20 | 0.35 | 0.35 | 0.11 | 0.29 | 0.29 | 0.09 | 0.27 | 0.27 |
| Volume/Cap: | 0.82 | 0.19 | 0.19 | 0.79 | 0.20 | 0.20 | 0.79 | 0.70 | 0.67 | 0.28 | 0.57 | 0.34 |
| Delay/Veh: | 68.1 | 31.0 | 31.0 | 55.2 | 26.2 | 26.2 | 68.7 | 38.8 | 39.9 | 49.6 | 37.0 | 34.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 68.1 | 31.0 | 31.0 | 55.2 | 26.2 | 26.2 | 68.7 | 38.8 | 39.9 | 49.6 | 37.0 | 34.2 |
| LOS by Move: | E | C | C | E | C | C | E | D | D | D | D | C |
| HCM2kAvgQ: | 9 | 3 | 3 | 11 | 3 | 3 | 7 | 13 | 11 | 2 | 9 | 4 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 33 | 81 | 8 | 320 | 171 | 200 | 23 | 239 | 261 | 159 | 219 | 47 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.92 | | 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) | 1805 | 5106 | | 3072 | 3289 | | 1805 | 3610 | 1432 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5106 | | 3072 | 3289 | | 1805 | 3610 | 1432 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Adj. Flow (vph) | 39 | 96 | 10 | 381 | 204 | 238 | 27 | 285 | 311 | 189 | 261 | 56 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| Lane Group Flow (vph) | 39 | 100 | 0 | 381 | 337 | 0 | 27 | 285 | 311 | 189 | 261 | 11 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 12% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 4.0 | 42.8 | | 25.4 | 64.2 | | 3.6 | 20.8 | 46.2 | 5.0 | 22.2 | 22.2 |
| Effective Green, g (s) | 4.0 | 42.8 | | 25.4 | 64.2 | | 3.6 | 20.8 | 46.2 | 5.0 | 22.2 | 22.2 |
| Actuated g/C Ratio | 0.03 | 0.37 | | 0.22 | 0.56 | | 0.03 | 0.18 | 0.40 | 0.04 | 0.19 | 0.19 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 62 | 1900 | | 678 | 1836 | | 56 | 652 | 575 | 152 | 696 | 306 |
| v/s Ratio Prot | 0.02 | 0.02 | | c0.12 | c0.10 | | 0.01 | 0.08 | c0.12 | c0.05 | 0.07 | |
| v/s Ratio Perm | | | | | | | | | 0.10 | | | 0.01 |
| v/c Ratio | 0.63 | 0.05 | | 0.56 | 0.18 | | 0.48 | 0.44 | 0.54 | 1.24 | 0.38 | 0.04 |
| Uniform Delay, d1 | 54.8 | 23.1 | | 39.9 | 12.5 | | 54.8 | 41.9 | 26.3 | 55.0 | 40.4 | 37.7 |
| Progression Factor | 1.00 | 1.00 | | 1.31 | 0.11 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 13.5 | 0.1 | | 0.6 | 0.2 | | 2.4 | 0.2 | 0.6 | 152.9 | 0.1 | 0.0 |
| Delay (s) | 68.3 | 23.2 | | 52.9 | 1.5 | | 57.2 | 42.1 | 26.9 | 207.9 | 40.5 | 37.7 |
| Level of Service | E | C | | D | A | | E | D | C | F | D | D |
| Approach Delay (s) | | 35.3 | | | 25.3 | | | 35.1 | | | 102.7 | |
| Approach LOS | | D | | | C | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 47.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.43 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 67.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Cycle (sec): 115 Critical Vol./Cap.(X): 0.371
Loss Time (sec): 12 Average Delay (sec/veh): 12.6
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 30 | 30 | 10 | 30 | 30 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1 | 3 | 17 | 41 | 3 | 8 | 5 | 830 | 11 | 3 | 614 | 38 |
| Added Vol: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 150 | 0 | 8 | 71 | 8 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1 | 3 | 27 | 51 | 3 | 8 | 5 | 980 | 11 | 11 | 685 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 1 | 3 | 28 | 53 | 3 | 8 | 5 | 1018 | 11 | 11 | 711 | 48 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1 | 3 | 28 | 53 | 3 | 8 | 5 | 1018 | 11 | 11 | 711 | 48 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1 | 3 | 28 | 53 | 3 | 8 | 5 | 1018 | 11 | 11 | 711 | 48 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.96 | 0.96 | 0.85 | 0.73 | 0.73 | 0.85 | 0.95 | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 |
| Lanes: | 0.25 | 0.75 | 1.00 | 0.94 | 0.06 | 1.00 | 1.00 | 1.98 | 0.02 | 1.00 | 1.87 | 0.13 |
| Final Sat.: | 457 | 1372 | 1615 | 1305 | 77 | 1615 | 1805 | 3563 | 40 | 1805 | 3352 | 225 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.02 | 0.04 | 0.04 | 0.01 | 0.00 | 0.29 | 0.29 | 0.01 | 0.21 | 0.21 |
| Crit Moves: | | | | | **** | | | **** | | **** | | |
| Green/Cycle: | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.19 | 0.68 | 0.68 | 0.09 | 0.57 | 0.57 |
| Volume/Cap: | 0.02 | 0.02 | 0.13 | 0.31 | 0.31 | 0.04 | 0.02 | 0.42 | 0.42 | 0.07 | 0.37 | 0.37 |
| Delay/Veh: | 43.6 | 43.6 | 44.5 | 46.3 | 46.3 | 43.8 | 37.7 | 8.4 | 8.4 | 48.4 | 13.4 | 13.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.6 | 43.6 | 44.5 | 46.3 | 46.3 | 43.8 | 37.7 | 8.4 | 8.4 | 48.4 | 13.4 | 13.4 |
| LOS by Move: | D | D | D | D | D | D | D | A | A | D | B | B |
| HCM2kAvgQ: | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 9 | 9 | 0 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 533 | 209 | 627 | 649 | 0 | 0 | 0 | 0 | 601 | 2 | 334 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.96 | | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4764 | | 1770 | 3505 | | | | | 3335 | 1398 | 1395 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4764 | | 1770 | 3505 | | | | | 3335 | 1398 | 1395 |
| Peak-hour factor, PHF | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 0 | 650 | 255 | 765 | 791 | 0 | 0 | 0 | 0 | 733 | 2 | 407 |
| RTOR Reduction (vph) | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156 | 155 |
| Lane Group Flow (vph) | 0 | 846 | 0 | 765 | 791 | 0 | 0 | 0 | 0 | 733 | 50 | 48 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 5% | 2% | 3% | 0% | 0% | 0% | 0% | 5% | 0% | 8% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 22.2 | | 54.4 | 81.2 | | | | | 28.2 | 28.2 | 28.2 |
| Effective Green, g (s) | | 22.2 | | 54.4 | 81.2 | | | | | 28.2 | 28.2 | 28.2 |
| Actuated g/C Ratio | | 0.18 | | 0.45 | 0.68 | | | | | 0.23 | 0.23 | 0.23 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 881 | | 802 | 2371 | | | | | 783 | 328 | 327 |
| v/s Ratio Prot | | c0.18 | | c0.43 | 0.23 | | | | | c0.22 | 0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.03 |
| v/c Ratio | | 0.96 | | 0.95 | 0.33 | | | | | 0.94 | 0.15 | 0.15 |
| Uniform Delay, d1 | | 48.5 | | 31.6 | 8.1 | | | | | 45.0 | 36.4 | 36.4 |
| Progression Factor | | 1.00 | | 1.23 | 1.13 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 22.2 | | 13.2 | 0.2 | | | | | 18.1 | 0.1 | 0.1 |
| Delay (s) | | 70.6 | | 52.1 | 9.4 | | | | | 63.1 | 36.5 | 36.4 |
| Level of Service | | E | | D | A | | | | | E | D | D |
| Approach Delay (s) | | 70.6 | | | 30.4 | | | 0.0 | | | 53.6 | |
| Approach LOS | | E | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 47.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.95 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 83.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 99 | 368 | 0 | 0 | 150 | 108 | 124 | 0 | 137 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 0.99 | | | 0.99 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.94 | | | 0.93 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.98 | | | | |
| Satd. Flow (prot) | 1671 | 1881 | | | 1701 | | | 1668 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.98 | | | | |
| Satd. Flow (perm) | 1671 | 1881 | | | 1701 | | | 1668 | | | | |
| Peak-hour factor, PHF | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Adj. Flow (vph) | 141 | 526 | 0 | 0 | 214 | 154 | 177 | 0 | 196 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 141 | 526 | 0 | 0 | 344 | 0 | 0 | 323 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 8% | 1% | 0% | 0% | 6% | 1% | 4% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.6 | 55.7 | | | 38.5 | | | 33.7 | | | | |
| Effective Green, g (s) | 12.6 | 55.7 | | | 38.5 | | | 33.7 | | | | |
| Actuated g/C Ratio | 0.13 | 0.56 | | | 0.38 | | | 0.34 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 210 | 1047 | | | 654 | | | 562 | | | | |
| v/s Ratio Prot | c0.08 | c0.28 | | | 0.20 | | | c0.19 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.50 | | | 0.53 | | | 0.58 | | | | |
| Uniform Delay, d1 | 41.7 | 13.6 | | | 23.7 | | | 27.3 | | | | |
| Progression Factor | 1.21 | 0.76 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 6.0 | 1.6 | | | 3.0 | | | 4.2 | | | | |
| Delay (s) | 56.7 | 12.0 | | | 26.7 | | | 31.5 | | | | |
| Level of Service | E | B | | | C | | | C | | | | |
| Approach Delay (s) | | 21.4 | | | 26.7 | | | 31.5 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 49.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 113 | 130 | 0 | 0 | 194 | 4 | 356 | 0 | 102 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1719 | 1863 | | | 1821 | | | 1728 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1719 | 1863 | | | 1821 | | | 1728 | | | | |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 136 | 157 | 0 | 0 | 234 | 5 | 429 | 0 | 123 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 136 | 157 | 0 | 0 | 238 | 0 | 0 | 512 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 5% | 2% | 0% | 0% | 3% | 50% | 3% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 11.6 | 42.7 | | | 26.5 | | | 46.7 | | | | |
| Effective Green, g (s) | 11.6 | 42.7 | | | 26.5 | | | 46.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.43 | | | 0.26 | | | 0.47 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 199 | 795 | | | 482 | | | 806 | | | | |
| v/s Ratio Prot | c0.08 | 0.08 | | | c0.13 | | | c0.30 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.68 | 0.20 | | | 0.49 | | | 0.64 | | | | |
| Uniform Delay, d1 | 42.4 | 17.9 | | | 31.1 | | | 20.2 | | | | |
| Progression Factor | 0.78 | 0.41 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 7.3 | 0.5 | | | 3.6 | | | 3.8 | | | | |
| Delay (s) | 40.3 | 7.8 | | | 34.7 | | | 24.0 | | | | |
| Level of Service | D | A | | | C | | | C | | | | |
| Approach Delay (s) | | 22.9 | | | 34.7 | | | 24.0 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 26.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 60.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 273 | 861 | 0 | 0 | 1079 | 1392 | 197 | 2 | 377 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.94 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 4988 | | | 3247 | 1470 | 1559 | 1567 | 2760 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 4988 | | | 3247 | 1470 | 1559 | 1567 | 2760 | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 310 | 978 | 0 | 0 | 1226 | 1582 | 224 | 2 | 428 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 60 | 260 | 0 | 0 | 307 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 310 | 978 | 0 | 0 | 1878 | 610 | 112 | 114 | 121 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 4% | 0% | 0% | 1% | 0% | 10% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 21.7 | 96.0 | | | 69.7 | 69.7 | 13.4 | 13.4 | 13.4 | | | |
| Effective Green, g (s) | 21.7 | 96.0 | | | 69.7 | 69.7 | 13.4 | 13.4 | 13.4 | | | |
| Actuated g/C Ratio | 0.18 | 0.80 | | | 0.58 | 0.58 | 0.11 | 0.11 | 0.11 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 597 | 3990 | | | 1885 | 853 | 174 | 174 | 308 | | | |
| v/s Ratio Prot | c0.09 | 0.20 | | | c0.58 | | 0.07 | c0.07 | | | | |
| v/s Ratio Perm | | | | | | 0.41 | | | 0.04 | | | |
| v/c Ratio | 0.52 | 0.25 | | | 1.00 | 0.71 | 0.64 | 0.66 | 0.39 | | | |
| Uniform Delay, d1 | 44.4 | 3.0 | | | 25.0 | 18.0 | 51.0 | 51.1 | 49.5 | | | |
| Progression Factor | 0.21 | 2.07 | | | 1.01 | 2.22 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 1.0 | 0.1 | | | 14.0 | 2.7 | 6.0 | 6.6 | 0.3 | | | |
| Delay (s) | 10.3 | 6.2 | | | 39.3 | 42.7 | 57.0 | 57.7 | 49.8 | | | |
| Level of Service | B | A | | | D | D | E | E | D | | | |
| Approach Delay (s) | | 7.2 | | | 40.4 | | | 52.4 | | | 0.0 | |
| Approach LOS | | A | | | D | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 33.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 83.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 199 | 815 | 225 | 191 | 1635 | 84 | 299 | 57 | 152 | 168 | 84 | 537 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | *1.00 | 1.00 | 0.97 | *1.00 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.98 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.89 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5377 | 1602 | 3502 | 5600 | | 3502 | 3610 | 1595 | 1805 | 2997 | 1453 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5377 | 1602 | 3502 | 5600 | | 3502 | 3610 | 1595 | 1805 | 2997 | 1453 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 219 | 896 | 247 | 210 | 1797 | 92 | 329 | 63 | 167 | 185 | 92 | 590 |
| RTOR Reduction (vph) | 0 | 0 | 64 | 0 | 5 | 0 | 0 | 0 | 48 | 0 | 225 | 120 |
| Lane Group Flow (vph) | 219 | 896 | 183 | 210 | 1884 | 0 | 329 | 63 | 119 | 185 | 162 | 175 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 9.1 | 37.0 | 75.5 | 12.5 | 40.4 | | 38.5 | 37.0 | 49.5 | 12.5 | 11.0 | 20.1 |
| Effective Green, g (s) | 9.1 | 37.0 | 75.5 | 12.5 | 40.4 | | 38.5 | 37.0 | 49.5 | 12.5 | 11.0 | 20.1 |
| Actuated g/C Ratio | 0.08 | 0.31 | 0.63 | 0.10 | 0.34 | | 0.32 | 0.31 | 0.41 | 0.10 | 0.09 | 0.17 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 265 | 1657 | 1007 | 364 | 1885 | | 1123 | 1113 | 717 | 188 | 274 | 243 |
| v/s Ratio Prot | c0.06 | 0.17 | 0.06 | c0.06 | c0.34 | | c0.09 | 0.02 | 0.02 | c0.10 | 0.05 | 0.05 |
| v/s Ratio Perm | | | 0.06 | | | | | | 0.06 | | | 0.07 |
| v/c Ratio | 0.83 | 0.54 | 0.18 | 0.58 | 1.00 | | 0.29 | 0.06 | 0.17 | 0.98 | 0.59 | 0.72 |
| Uniform Delay, d1 | 54.7 | 34.4 | 9.3 | 51.2 | 39.8 | | 30.5 | 29.2 | 22.2 | 53.7 | 52.3 | 47.3 |
| Progression Factor | 0.97 | 1.16 | 0.93 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 17.1 | 1.2 | 0.4 | 1.4 | 20.6 | | 0.7 | 0.1 | 0.0 | 60.4 | 2.3 | 8.6 |
| Delay (s) | 70.2 | 41.2 | 9.1 | 52.6 | 60.4 | | 31.2 | 29.3 | 22.3 | 114.1 | 54.6 | 55.9 |
| Level of Service | E | D | A | D | E | | C | C | C | F | D | E |
| Approach Delay (s) | | 40.0 | | | 59.6 | | | 28.3 | | | 67.7 | |
| Approach LOS | | D | | | E | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 52.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 96.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 115 Critical Vol./Cap.(X): 0.709
Loss Time (sec): 16 Average Delay (sec/veh): 45.7
Optimal Cycle: OPTIMIZED Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 228 | 349 | 23 | 224 | 271 | 208 | 168 | 786 | 264 | 57 | 587 | 337 |
| Added Vol: | 3 | 0 | 14 | 14 | 0 | 3 | 3 | 90 | 3 | 13 | 135 | 13 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 231 | 349 | 37 | 238 | 271 | 211 | 171 | 876 | 267 | 70 | 722 | 350 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 247 | 374 | 40 | 255 | 290 | 226 | 183 | 938 | 286 | 75 | 773 | 375 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 3218 | 341 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.12 | 0.12 | 0.14 | 0.08 | 0.14 | 0.10 | 0.26 | 0.18 | 0.04 | 0.21 | 0.23 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.17 | 0.30 | 0.30 | 0.15 | 0.29 | 0.29 | 0.12 | 0.31 | 0.31 | 0.10 | 0.28 | 0.28 |
| Volume/Cap: | 0.82 | 0.38 | 0.38 | 0.94 | 0.28 | 0.49 | 0.82 | 0.84 | 0.58 | 0.42 | 0.76 | 0.82 |
| Delay/Veh: | 62.3 | 31.7 | 31.7 | 87.8 | 31.9 | 34.8 | 69.9 | 43.3 | 35.2 | 50.3 | 40.9 | 49.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 62.3 | 31.7 | 31.7 | 87.8 | 31.9 | 34.8 | 69.9 | 43.3 | 35.2 | 50.3 | 40.9 | 49.7 |
| LOS by Move: | E | C | C | F | C | C | E | D | D | D | D | D |
| HCM2kAvgQ: | 11 | 6 | 6 | 13 | 4 | 7 | 9 | 19 | 9 | 3 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 74 | 144 | 15 | 451 | 183 | 257 | 26 | 404 | 339 | 235 | 389 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.91 | | 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) | 1805 | 5106 | | 3367 | 3262 | | 1805 | 3610 | 1510 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5106 | | 3367 | 3262 | | 1805 | 3610 | 1510 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 75 | 145 | 15 | 456 | 185 | 260 | 26 | 408 | 342 | 237 | 393 | 52 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| Lane Group Flow (vph) | 75 | 150 | 0 | 456 | 290 | 0 | 26 | 408 | 342 | 237 | 393 | 14 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 8.8 | 38.6 | | 16.5 | 46.3 | | 7.4 | 21.8 | 38.3 | 17.1 | 31.5 | 31.5 |
| Effective Green, g (s) | 8.8 | 38.6 | | 16.5 | 46.3 | | 7.4 | 21.8 | 38.3 | 17.1 | 31.5 | 31.5 |
| Actuated g/C Ratio | 0.08 | 0.34 | | 0.14 | 0.40 | | 0.06 | 0.19 | 0.33 | 0.15 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 138 | 1713 | | 483 | 1313 | | 116 | 684 | 502 | 520 | 988 | 435 |
| v/s Ratio Prot | 0.04 | 0.03 | | c0.14 | c0.09 | | 0.01 | 0.11 | c0.10 | c0.07 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | 0.13 | | | 0.01 |
| v/c Ratio | 0.54 | 0.09 | | 0.94 | 0.22 | | 0.22 | 0.60 | 0.68 | 0.46 | 0.40 | 0.03 |
| Uniform Delay, d1 | 51.2 | 26.1 | | 48.8 | 22.5 | | 51.1 | 42.6 | 33.1 | 44.7 | 34.0 | 30.6 |
| Progression Factor | 1.00 | 1.00 | | 0.96 | 0.46 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.3 | 0.1 | | 25.7 | 0.4 | | 0.4 | 0.9 | 3.0 | 0.2 | 0.1 | 0.0 |
| Delay (s) | 53.5 | 26.2 | | 72.7 | 10.8 | | 51.4 | 43.5 | 36.1 | 44.9 | 34.1 | 30.6 |
| Level of Service | D | C | | E | B | | D | D | D | D | C | C |
| Approach Delay (s) | | 34.9 | | | 42.2 | | | 40.5 | | | 37.6 | |
| Approach LOS | | C | | | D | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 85.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 0.448
Loss Time (sec): 12 Average Delay (sec/veh): 12.7
Optimal Cycle: OPTIMIZED Level Of Service: B

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 30 | 30 | 10 | 30 | 30 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 10 | 33 | 2 | 7 | 6 | 1028 | 6 | 7 | 968 | 104 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 10 | 33 | 2 | 7 | 6 | 1028 | 6 | 7 | 968 | 104 |
| Added Vol: | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 122 | 0 | 13 | 166 | 13 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 2 | 2 | 22 | 45 | 2 | 7 | 6 | 1150 | 6 | 20 | 1134 | 117 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 2 | 2 | 23 | 47 | 2 | 7 | 6 | 1193 | 6 | 21 | 1176 | 121 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 23 | 47 | 2 | 7 | 6 | 1193 | 6 | 21 | 1176 | 121 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 23 | 47 | 2 | 7 | 6 | 1193 | 6 | 21 | 1176 | 121 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.85 | 0.73 | 0.73 | 0.85 | 0.95 | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 |
| Lanes: | 0.50 | 0.50 | 1.00 | 0.96 | 0.04 | 1.00 | 1.00 | 1.99 | 0.01 | 1.00 | 1.81 | 0.19 |
| Final Sat.: | 880 | 880 | 1615 | 1324 | 59 | 1615 | 1805 | 3588 | 19 | 1805 | 3227 | 333 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.01 | 0.04 | 0.04 | 0.00 | 0.00 | 0.33 | 0.33 | 0.01 | 0.36 | 0.36 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.08 | 0.62 | 0.62 | 0.16 | 0.69 | 0.69 |
| Volume/Cap: | 0.02 | 0.02 | 0.11 | 0.28 | 0.28 | 0.04 | 0.04 | 0.54 | 0.54 | 0.07 | 0.53 | 0.53 |
| Delay/Veh: | 46.1 | 46.1 | 46.8 | 48.5 | 48.5 | 46.2 | 50.7 | 13.3 | 13.3 | 43.4 | 9.2 | 9.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.1 | 46.1 | 46.8 | 48.5 | 48.5 | 46.2 | 50.7 | 13.3 | 13.3 | 43.4 | 9.2 | 9.2 |
| LOS by Move: | D | D | D | D | D | D | D | B | B | D | A | A |
| HCM2kAvgQ: | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 13 | 13 | 1 | 12 | 12 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 727 | 184 | 428 | 745 | 0 | 0 | 0 | 0 | 1036 | 6 | 400 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.97 | | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4903 | | 1770 | 3574 | | | | | 3467 | 1490 | 1480 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4903 | | 1770 | 3574 | | | | | 3467 | 1490 | 1480 |
| 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) | 0 | 790 | 200 | 465 | 810 | 0 | 0 | 0 | 0 | 1126 | 7 | 435 |
| RTOR Reduction (vph) | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 105 | 105 |
| Lane Group Flow (vph) | 0 | 954 | 0 | 465 | 810 | 0 | 0 | 0 | 0 | 1126 | 115 | 117 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 1% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 2% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 25.6 | | 37.4 | 67.6 | | | | | 41.8 | 41.8 | 41.8 |
| Effective Green, g (s) | | 25.6 | | 37.4 | 67.6 | | | | | 41.8 | 41.8 | 41.8 |
| Actuated g/C Ratio | | 0.21 | | 0.31 | 0.56 | | | | | 0.35 | 0.35 | 0.35 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1045 | | 551 | 2013 | | | | | 1207 | 519 | 515 |
| v/s Ratio Prot | | c0.19 | | c0.26 | 0.23 | | | | | c0.32 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.08 |
| v/c Ratio | | 0.91 | | 0.84 | 0.40 | | | | | 0.93 | 0.22 | 0.23 |
| Uniform Delay, d1 | | 46.1 | | 38.6 | 14.8 | | | | | 37.7 | 27.6 | 27.7 |
| Progression Factor | | 1.00 | | 1.61 | 1.27 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 13.4 | | 9.0 | 0.5 | | | | | 12.7 | 0.1 | 0.1 |
| Delay (s) | | 59.5 | | 71.0 | 19.3 | | | | | 50.5 | 27.7 | 27.8 |
| Level of Service | | E | | E | B | | | | | D | C | C |
| Approach Delay (s) | | 59.5 | | | 38.2 | | | 0.0 | | | 44.1 | |
| Approach LOS | | E | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 46.1 | 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) | 15.2 |
| Intersection Capacity Utilization | 84.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 186 | 140 | 0 | 0 | 123 | 26 | 267 | 0 | 32 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 0.99 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.99 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1736 | 1863 | | | 1814 | | | 1756 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1736 | 1863 | | | 1814 | | | 1756 | | | | |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Adj. Flow (vph) | 221 | 167 | 0 | 0 | 146 | 31 | 318 | 0 | 38 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 221 | 167 | 0 | 0 | 170 | 0 | 0 | 309 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 4% | 2% | 0% | 0% | 2% | 0% | 2% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 52.7 | | | 31.1 | | | 36.7 | | | | |
| Effective Green, g (s) | 17.0 | 52.7 | | | 31.1 | | | 36.7 | | | | |
| Actuated g/C Ratio | 0.17 | 0.53 | | | 0.31 | | | 0.37 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 295 | 981 | | | 564 | | | 644 | | | | |
| v/s Ratio Prot | c0.13 | 0.09 | | | c0.09 | | | c0.18 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.75 | 0.17 | | | 0.30 | | | 0.48 | | | | |
| Uniform Delay, d1 | 39.5 | 12.3 | | | 26.2 | | | 24.3 | | | | |
| Progression Factor | 0.64 | 0.90 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 8.4 | 0.4 | | | 1.4 | | | 2.5 | | | | |
| Delay (s) | 33.6 | 11.4 | | | 27.6 | | | 26.9 | | | | |
| Level of Service | C | B | | | C | | | C | | | | |
| Approach Delay (s) | | 24.0 | | | 27.6 | | | 26.9 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.47 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 55.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 133 | 194 | 0 | 0 | 220 | 32 | 292 | 0 | 130 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.96 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (prot) | 1719 | 1881 | | | 1828 | | | 1716 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (perm) | 1719 | 1881 | | | 1828 | | | 1716 | | | | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 151 | 220 | 0 | 0 | 250 | 36 | 332 | 0 | 148 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 151 | 220 | 0 | 0 | 281 | 0 | 0 | 436 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 5% | 1% | 0% | 0% | 2% | 0% | 3% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.5 | 47.7 | | | 30.6 | | | 41.7 | | | | |
| Effective Green, g (s) | 12.5 | 47.7 | | | 30.6 | | | 41.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.48 | | | 0.31 | | | 0.42 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 214 | 897 | | | 559 | | | 715 | | | | |
| v/s Ratio Prot | c0.09 | 0.12 | | | c0.15 | | | c0.25 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.71 | 0.25 | | | 0.50 | | | 0.61 | | | | |
| Uniform Delay, d1 | 42.0 | 15.5 | | | 28.5 | | | 22.8 | | | | |
| Progression Factor | 1.70 | 0.41 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 7.9 | 0.6 | | | 3.2 | | | 3.9 | | | | |
| Delay (s) | 79.1 | 6.9 | | | 31.7 | | | 26.7 | | | | |
| Level of Service | E | A | | | C | | | C | | | | |
| Approach Delay (s) | | 36.3 | | | 31.7 | | | 26.7 | | | 0.0 | |
| Approach LOS | | D | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.58 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 60.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 328 | 1435 | 0 | 0 | 892 | 814 | 281 | 3 | 656 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.96 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3303 | 5136 | | | 3297 | 1455 | 1665 | 1672 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3303 | 5136 | | | 3297 | 1455 | 1665 | 1672 | 2814 | | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 345 | 1511 | 0 | 0 | 939 | 857 | 296 | 3 | 691 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 25 | 230 | 0 | 0 | 109 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 345 | 1511 | 0 | 0 | 1223 | 318 | 148 | 151 | 582 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 6% | 1% | 0% | 0% | 1% | 1% | 3% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | 19.7 | 19.7 | 19.7 | | | |
| Effective Green, g (s) | 15.4 | 89.7 | | | 69.7 | 69.7 | 19.7 | 19.7 | 19.7 | | | |
| Actuated g/C Ratio | 0.13 | 0.75 | | | 0.58 | 0.58 | 0.16 | 0.16 | 0.16 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 423 | 3839 | | | 1915 | 845 | 273 | 274 | 461 | | | |
| v/s Ratio Prot | c0.10 | 0.29 | | | c0.37 | | 0.09 | 0.09 | | | | |
| v/s Ratio Perm | | | | | | 0.22 | | | c0.21 | | | |
| v/c Ratio | 0.82 | 0.39 | | | 0.64 | 0.38 | 0.54 | 0.55 | 1.26 | | | |
| Uniform Delay, d1 | 50.9 | 5.4 | | | 16.8 | 13.5 | 46.0 | 46.1 | 50.1 | | | |
| Progression Factor | 0.30 | 1.14 | | | 1.59 | 7.55 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 6.9 | 0.1 | | | 1.2 | 0.9 | 1.2 | 1.4 | 134.9 | | | |
| Delay (s) | 22.3 | 6.3 | | | 27.9 | 102.8 | 47.2 | 47.4 | 185.0 | | | |
| Level of Service | C | A | | | C | F | D | D | F | | | |
| Approach Delay (s) | | 9.3 | | | 50.7 | | | 143.5 | | | 0.0 | |
| Approach LOS | | A | | | D | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 53.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 84.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 408 | 1287 | 438 | 169 | 936 | 73 | 383 | 160 | 287 | 223 | 182 | 386 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5085 | 1601 | 3502 | 5031 | | 3502 | 3610 | 1593 | 1805 | 3147 | 1457 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5085 | 1601 | 3502 | 5031 | | 3502 | 3610 | 1593 | 1805 | 3147 | 1457 |
| Peak-hour factor, PHF | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 469 | 1479 | 503 | 194 | 1076 | 84 | 440 | 184 | 330 | 256 | 209 | 444 |
| RTOR Reduction (vph) | 0 | 0 | 23 | 0 | 7 | 0 | 0 | 0 | 85 | 0 | 162 | 96 |
| Lane Group Flow (vph) | 469 | 1479 | 480 | 194 | 1153 | 0 | 440 | 184 | 245 | 256 | 269 | 126 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 14.5 | 40.6 | 79.1 | 7.9 | 34.0 | | 38.5 | 37.0 | 44.9 | 13.5 | 12.0 | 26.5 |
| Effective Green, g (s) | 14.5 | 40.6 | 79.1 | 7.9 | 34.0 | | 38.5 | 37.0 | 44.9 | 13.5 | 12.0 | 26.5 |
| Actuated g/C Ratio | 0.12 | 0.34 | 0.66 | 0.07 | 0.28 | | 0.32 | 0.31 | 0.37 | 0.11 | 0.10 | 0.22 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 423 | 1720 | 1055 | 230 | 1425 | | 1123 | 1113 | 596 | 203 | 314 | 321 |
| v/s Ratio Prot | c0.13 | c0.29 | c0.15 | 0.06 | c0.23 | | 0.13 | 0.05 | 0.03 | c0.14 | 0.09 | 0.05 |
| v/s Ratio Perm | | | 0.15 | | | | | | 0.13 | | | 0.04 |
| v/c Ratio | 1.11 | 0.86 | 0.45 | 0.84 | 0.81 | | 0.39 | 0.17 | 0.41 | 1.26 | 0.86 | 0.39 |
| Uniform Delay, d1 | 52.8 | 37.0 | 10.0 | 55.4 | 40.0 | | 31.7 | 30.2 | 27.8 | 53.2 | 53.2 | 39.9 |
| Progression Factor | 0.82 | 0.81 | 1.45 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 72.8 | 4.9 | 1.2 | 22.7 | 5.1 | | 1.0 | 0.3 | 0.2 | 150.8 | 19.3 | 0.3 |
| Delay (s) | 116.1 | 34.7 | 15.6 | 78.1 | 45.0 | | 32.7 | 30.6 | 27.9 | 204.1 | 72.4 | 40.2 |
| Level of Service | F | C | B | E | D | | C | C | C | F | E | D |
| Approach Delay (s) | | 46.4 | | | 49.8 | | | 30.6 | | | 101.6 | |
| Approach LOS | | D | | | D | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 53.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 99.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 115 | Critical Vol./Cap.(X): | 0.645 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 43.7 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 185 | 239 | 50 | 260 | 248 | 180 | 174 | 631 | 231 | 68 | 594 | 274 |
| Added Vol: | 4 | 0 | 20 | 20 | 0 | 4 | 4 | 113 | 4 | 20 | 121 | 20 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 189 | 239 | 70 | 280 | 248 | 184 | 178 | 744 | 235 | 88 | 715 | 294 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 194 | 246 | 72 | 288 | 255 | 189 | 183 | 765 | 242 | 90 | 735 | 302 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 1.55 | 0.45 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 2697 | 790 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.09 | 0.09 | 0.16 | 0.07 | 0.12 | 0.10 | 0.21 | 0.15 | 0.05 | 0.20 | 0.19 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.29 | 0.29 | 0.19 | 0.34 | 0.34 | 0.12 | 0.29 | 0.29 | 0.09 | 0.27 | 0.27 |
| Volume/Cap: | 0.83 | 0.32 | 0.32 | 0.86 | 0.21 | 0.34 | 0.86 | 0.72 | 0.51 | 0.53 | 0.76 | 0.69 |
| Delay/Veh: | 70.9 | 32.3 | 32.3 | 64.4 | 26.7 | 28.4 | 77.1 | 38.9 | 34.7 | 52.8 | 41.9 | 42.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 70.9 | 32.3 | 32.3 | 64.4 | 26.7 | 28.4 | 77.1 | 38.9 | 34.7 | 52.8 | 41.9 | 42.5 |
| LOS by Move: | E | C | C | E | C | C | E | D | C | D | D | D |
| HCM2kAvgQ: | 9 | 5 | 5 | 13 | 3 | 5 | 9 | 14 | 7 | 4 | 14 | 11 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 66 | 157 | 11 | 483 | 116 | 264 | 27 | 345 | 486 | 259 | 290 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.90 | | 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) | 1805 | 5129 | | 3433 | 3197 | | 1805 | 3610 | 1540 | 3502 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5129 | | 3433 | 3197 | | 1805 | 3610 | 1540 | 3502 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 69 | 165 | 12 | 508 | 122 | 278 | 28 | 363 | 512 | 273 | 305 | 39 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 69 | 170 | 0 | 508 | 240 | 0 | 28 | 363 | 512 | 273 | 305 | 10 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 7.0 | 39.2 | | 18.9 | 51.1 | | 8.9 | 21.0 | 39.9 | 19.9 | 32.0 | 32.0 |
| Effective Green, g (s) | 7.0 | 39.2 | | 18.9 | 51.1 | | 8.9 | 21.0 | 39.9 | 19.9 | 32.0 | 32.0 |
| Actuated g/C Ratio | 0.06 | 0.33 | | 0.16 | 0.43 | | 0.07 | 0.18 | 0.33 | 0.17 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 105 | 1675 | | 540 | 1361 | | 133 | 631 | 512 | 580 | 962 | 423 |
| v/s Ratio Prot | 0.04 | 0.03 | | 0.15 | c0.08 | | 0.02 | 0.10 | c0.16 | c0.08 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | 0.18 | | | 0.01 |
| v/c Ratio | 0.66 | 0.10 | | 0.94 | 0.18 | | 0.21 | 0.58 | 1.00 | 0.47 | 0.32 | 0.02 |
| Uniform Delay, d1 | 55.3 | 28.1 | | 50.0 | 21.4 | | 52.2 | 45.4 | 40.0 | 45.3 | 35.2 | 32.5 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.8 | 0.1 | | 24.6 | 0.3 | | 0.3 | 0.8 | 39.8 | 0.2 | 0.1 | 0.0 |
| Delay (s) | 66.1 | 28.3 | | 74.6 | 21.7 | | 52.5 | 46.2 | 79.8 | 45.5 | 35.3 | 32.5 |
| Level of Service | E | C | | E | C | | D | D | E | D | D | C |
| Approach Delay (s) | | 38.9 | | | 51.3 | | | 65.5 | | | 39.6 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 52.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 85.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
Opening Year (2016) With Project Conditions WITH IMPROVEMENTS
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 0.439 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.3 |
| Optimal Cycle: | OPTIMIZED | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 30 | 30 | 10 | 30 | 30 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 0 | 17 | 14 | 0 | 8 | 8 | 915 | 74 | 12 | 996 | 14 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 0 | 17 | 14 | 0 | 8 | 8 | 915 | 74 | 12 | 996 | 14 |
| Added Vol: | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 159 | 0 | 18 | 166 | 18 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 37 | 0 | 35 | 32 | 0 | 8 | 8 | 1074 | 74 | 30 | 1162 | 32 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 40 | 0 | 38 | 35 | 0 | 9 | 9 | 1166 | 80 | 33 | 1262 | 35 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 40 | 0 | 38 | 35 | 0 | 9 | 9 | 1166 | 80 | 33 | 1262 | 35 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 40 | 0 | 38 | 35 | 0 | 9 | 9 | 1166 | 80 | 33 | 1262 | 35 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.71 | 1.00 | 0.85 | 0.72 | 1.00 | 0.85 | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.95 |
| Lanes: | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.87 | 0.13 | 1.00 | 1.95 | 0.05 |
| Final Sat.: | 1349 | 0 | 1615 | 1366 | 0 | 1615 | 1805 | 3344 | 230 | 1805 | 3499 | 96 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.02 | 0.03 | 0.00 | 0.01 | 0.00 | 0.35 | 0.35 | 0.02 | 0.36 | 0.36 |
| Crit Moves: | **** | | | | | | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.00 | 0.13 | 0.13 | 0.00 | 0.13 | 0.08 | 0.63 | 0.63 | 0.15 | 0.69 | 0.69 |
| Volume/Cap: | 0.24 | 0.00 | 0.19 | 0.20 | 0.00 | 0.04 | 0.06 | 0.56 | 0.56 | 0.12 | 0.52 | 0.52 |
| Delay/Veh: | 48.1 | 0.0 | 47.5 | 47.7 | 0.0 | 46.3 | 50.8 | 13.2 | 13.2 | 44.4 | 9.1 | 9.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.1 | 0.0 | 47.5 | 47.7 | 0.0 | 46.3 | 50.8 | 13.2 | 13.2 | 44.4 | 9.1 | 9.1 |
| LOS by Move: | D | A | D | D | A | D | D | B | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 14 | 14 | 1 | 12 | 12 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 919 | 240 | 414 | 762 | 0 | 0 | 0 | 0 | 976 | 2 | 412 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.91 | | 1.00 | 0.95 | | | | | 0.97 | 0.95 | 0.95 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 0.98 | 0.98 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 0.97 | | 1.00 | 1.00 | | | | | 1.00 | 0.85 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 4966 | | 1770 | 3574 | | | | | 3467 | 1497 | 1494 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 4966 | | 1770 | 3574 | | | | | 3467 | 1497 | 1494 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 938 | 245 | 422 | 778 | 0 | 0 | 0 | 0 | 996 | 2 | 420 |
| RTOR Reduction (vph) | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 |
| Lane Group Flow (vph) | 0 | 1146 | 0 | 422 | 778 | 0 | 0 | 0 | 0 | 996 | 79 | 77 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | | NA | | Prot | NA | | | | | Split | NA | Perm |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Actuated Green, G (s) | | 35.6 | | 31.6 | 71.8 | | | | | 37.6 | 37.6 | 37.6 |
| Effective Green, g (s) | | 35.6 | | 31.6 | 71.8 | | | | | 37.6 | 37.6 | 37.6 |
| Actuated g/C Ratio | | 0.30 | | 0.26 | 0.60 | | | | | 0.31 | 0.31 | 0.31 |
| Clearance Time (s) | | 5.3 | | 4.6 | 5.3 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1473 | | 466 | 2138 | | | | | 1086 | 469 | 468 |
| v/s Ratio Prot | | c0.23 | | c0.24 | 0.22 | | | | | c0.29 | 0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.05 |
| v/c Ratio | | 0.78 | | 0.91 | 0.36 | | | | | 0.92 | 0.17 | 0.17 |
| Uniform Delay, d1 | | 38.6 | | 42.8 | 12.4 | | | | | 39.7 | 29.9 | 29.8 |
| Progression Factor | | 1.00 | | 1.14 | 1.74 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 4.1 | | 15.3 | 0.4 | | | | | 11.7 | 0.1 | 0.1 |
| Delay (s) | | 42.7 | | 64.1 | 21.9 | | | | | 51.4 | 29.9 | 29.9 |
| Level of Service | | D | | E | C | | | | | D | C | C |
| Approach Delay (s) | | 42.7 | | | 36.7 | | | 0.0 | | | 45.0 | |
| Approach LOS | | D | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 41.7 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.87 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 86.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 205 | 113 | 0 | 0 | 115 | 19 | 257 | 0 | 22 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 0.98 | | | 0.99 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (prot) | 1805 | 1827 | | | 1835 | | | 1793 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.96 | | | | |
| Satd. Flow (perm) | 1805 | 1827 | | | 1835 | | | 1793 | | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 209 | 115 | 0 | 0 | 117 | 19 | 262 | 0 | 22 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 209 | 115 | 0 | 0 | 131 | 0 | 0 | 235 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 0% | 4% | 5% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 15.9 | 54.7 | | | 34.2 | | | 34.7 | | | | |
| Effective Green, g (s) | 15.9 | 54.7 | | | 34.2 | | | 34.7 | | | | |
| Actuated g/C Ratio | 0.16 | 0.55 | | | 0.34 | | | 0.35 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 286 | 999 | | | 627 | | | 622 | | | | |
| v/s Ratio Prot | c0.12 | 0.06 | | | c0.07 | | | c0.13 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.73 | 0.12 | | | 0.21 | | | 0.38 | | | | |
| Uniform Delay, d1 | 40.0 | 10.9 | | | 23.3 | | | 24.5 | | | | |
| Progression Factor | 0.66 | 1.09 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 7.7 | 0.2 | | | 0.8 | | | 1.7 | | | | |
| Delay (s) | 34.0 | 12.1 | | | 24.1 | | | 26.3 | | | | |
| Level of Service | C | B | | | C | | | C | | | | |
| Approach Delay (s) | | 26.2 | | | 24.1 | | | 26.3 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.38 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 55.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 130 | 187 | 0 | 0 | 190 | 2 | 168 | 0 | 92 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 0.99 | | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | | | 1.00 | | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | | | 0.95 | | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (prot) | 1770 | 1881 | | | 1878 | | | 1704 | | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | | | 0.97 | | | | |
| Satd. Flow (perm) | 1770 | 1881 | | | 1878 | | | 1704 | | | | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 140 | 201 | 0 | 0 | 204 | 2 | 181 | 0 | 99 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 140 | 201 | 0 | 0 | 205 | 0 | 0 | 232 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | 5 | | | |
| Heavy Vehicles (%) | 2% | 1% | 0% | 0% | 1% | 0% | 3% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | | Split | NA | | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.3 | 53.7 | | | 36.8 | | | 35.7 | | | | |
| Effective Green, g (s) | 12.3 | 53.7 | | | 36.8 | | | 35.7 | | | | |
| Actuated g/C Ratio | 0.12 | 0.54 | | | 0.37 | | | 0.36 | | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | | | 5.3 | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | | | 2.0 | | | | |
| Lane Grp Cap (vph) | 217 | 1010 | | | 691 | | | 608 | | | | |
| v/s Ratio Prot | c0.08 | 0.11 | | | c0.11 | | | c0.14 | | | | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.65 | 0.20 | | | 0.30 | | | 0.38 | | | | |
| Uniform Delay, d1 | 41.8 | 12.0 | | | 22.4 | | | 23.9 | | | | |
| Progression Factor | 1.63 | 0.55 | | | 1.00 | | | 1.00 | | | | |
| Incremental Delay, d2 | 4.7 | 0.4 | | | 1.1 | | | 1.8 | | | | |
| Delay (s) | 72.7 | 7.0 | | | 23.5 | | | 25.7 | | | | |
| Level of Service | E | A | | | C | | | C | | | | |
| Approach Delay (s) | | 34.0 | | | 23.5 | | | 25.7 | | | 0.0 | |
| Approach LOS | | C | | | C | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.38 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 50.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 365 | 1530 | 0 | 0 | 1009 | 956 | 167 | 4 | 440 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 0.97 | 0.91 | | | 0.91 | 0.91 | 0.95 | 0.95 | 0.88 | | | |
| Frt | 1.00 | 1.00 | | | 0.96 | 0.85 | 1.00 | 1.00 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (prot) | 3467 | 5136 | | | 3290 | 1455 | 1698 | 1707 | 2814 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | | | |
| Satd. Flow (perm) | 3467 | 5136 | | | 3290 | 1455 | 1698 | 1707 | 2814 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 372 | 1561 | 0 | 0 | 1030 | 976 | 170 | 4 | 449 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 27 | 253 | 0 | 0 | 101 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 372 | 1561 | 0 | 0 | 1364 | 362 | 87 | 87 | 348 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Perm | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | | | | |
| Permitted Phases | | | | | | 6 | | | 8 | | | |
| Actuated Green, G (s) | 17.4 | 91.7 | | | 69.7 | 69.7 | 17.7 | 17.7 | 17.7 | | | |
| Effective Green, g (s) | 17.4 | 91.7 | | | 69.7 | 69.7 | 17.7 | 17.7 | 17.7 | | | |
| Actuated g/C Ratio | 0.14 | 0.76 | | | 0.58 | 0.58 | 0.15 | 0.15 | 0.15 | | | |
| Clearance Time (s) | 4.6 | 5.3 | | | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 4.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 502 | 3924 | | | 1910 | 845 | 250 | 251 | 415 | | | |
| v/s Ratio Prot | c0.11 | 0.30 | | | c0.41 | | 0.05 | 0.05 | | | | |
| v/s Ratio Perm | | | | | | 0.25 | | | c0.12 | | | |
| v/c Ratio | 0.74 | 0.40 | | | 0.71 | 0.43 | 0.35 | 0.35 | 0.84 | | | |
| Uniform Delay, d1 | 49.1 | 4.8 | | | 18.0 | 14.0 | 46.0 | 46.0 | 49.8 | | | |
| Progression Factor | 1.67 | 0.68 | | | 1.69 | 10.64 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 5.8 | 0.1 | | | 1.6 | 1.1 | 0.3 | 0.3 | 13.3 | | | |
| Delay (s) | 87.9 | 3.4 | | | 32.0 | 150.4 | 46.3 | 46.3 | 63.1 | | | |
| Level of Service | F | A | | | C | F | D | D | E | | | |
| Approach Delay (s) | | 19.6 | | | 68.3 | | | 58.4 | | | 0.0 | |
| Approach LOS | | B | | | E | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 46.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.2 |
| Intersection Capacity Utilization | 86.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 376 | 1084 | 511 | 221 | 1091 | 105 | 479 | 174 | 264 | 138 | 159 | 395 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 0.98 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 5085 | 1602 | 3502 | 4975 | | 3502 | 3610 | 1594 | 1805 | 3121 | 1458 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 5085 | 1602 | 3502 | 4975 | | 3502 | 3610 | 1594 | 1805 | 3121 | 1458 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 384 | 1106 | 521 | 226 | 1113 | 107 | 489 | 178 | 269 | 141 | 162 | 403 |
| RTOR Reduction (vph) | 0 | 0 | 29 | 0 | 9 | 0 | 0 | 0 | 40 | 0 | 183 | 85 |
| Lane Group Flow (vph) | 384 | 1106 | 492 | 226 | 1211 | 0 | 489 | 178 | 229 | 141 | 181 | 116 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | pm+ov | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | | 3 | 8 | 1 | 7 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 15.6 | 37.9 | 76.4 | 11.6 | 33.9 | | 38.5 | 37.8 | 49.4 | 11.7 | 11.0 | 26.6 |
| Effective Green, g (s) | 15.6 | 37.9 | 76.4 | 11.6 | 33.9 | | 38.5 | 37.8 | 49.4 | 11.7 | 11.0 | 26.6 |
| Actuated g/C Ratio | 0.13 | 0.32 | 0.64 | 0.10 | 0.28 | | 0.32 | 0.31 | 0.41 | 0.10 | 0.09 | 0.22 |
| Clearance Time (s) | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | | 4.5 | 6.0 | 4.5 | 4.5 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 455 | 1606 | 1019 | 338 | 1405 | | 1123 | 1137 | 656 | 175 | 286 | 323 |
| v/s Ratio Prot | c0.11 | c0.22 | c0.15 | 0.06 | c0.24 | | 0.14 | 0.05 | 0.03 | c0.08 | c0.06 | 0.05 |
| v/s Ratio Perm | | | 0.15 | | | | | | 0.11 | | | 0.03 |
| v/c Ratio | 0.84 | 0.69 | 0.48 | 0.67 | 0.86 | | 0.44 | 0.16 | 0.35 | 0.81 | 0.63 | 0.36 |
| Uniform Delay, d1 | 51.0 | 35.9 | 11.4 | 52.3 | 40.8 | | 32.2 | 29.6 | 24.3 | 53.0 | 52.5 | 39.5 |
| Progression Factor | 0.86 | 0.85 | 1.30 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 11.6 | 2.2 | 1.5 | 3.9 | 7.2 | | 1.2 | 0.3 | 0.1 | 21.8 | 3.3 | 0.3 |
| Delay (s) | 55.6 | 32.6 | 16.3 | 56.2 | 48.0 | | 33.4 | 29.9 | 24.4 | 74.9 | 55.9 | 39.7 |
| Level of Service | E | C | B | E | D | | C | C | C | E | E | D |
| Approach Delay (s) | | 32.8 | | | 49.3 | | | 30.1 | | | 55.1 | |
| Approach LOS | | C | | | D | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 94.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# APPENDIX 7.1

General Plan Buildout (Post-2035) Without Project Conditions
Intersection Operations Analysis Worksheets

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.377
Loss Time (sec): 16 Average Delay (sec/veh): 265.7
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T | - R | | L - T | - R | | L - T | - R | | L - T | - R | |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 274 | 437 | 34 | 714 | 389 | 229 | 402 | 1752 | 409 | 82 | 729 | 317 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 274 | 437 | 34 | 714 | 389 | 229 | 402 | 1752 | 409 | 82 | 729 | 317 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 288 | 460 | 36 | 752 | 409 | 241 | 423 | 1844 | 431 | 86 | 767 | 334 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 288 | 460 | 36 | 752 | 409 | 241 | 423 | 1844 | 431 | 86 | 767 | 334 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 288 | 460 | 36 | 752 | 409 | 241 | 423 | 1844 | 431 | 86 | 767 | 334 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.86 | 0.14 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3313 | 258 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.14 | 0.14 | 0.42 | 0.11 | 0.15 | 0.23 | 0.51 | 0.27 | 0.05 | 0.40 | 0.21 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.18 | 0.28 | 0.28 | 0.21 | 0.31 | 0.31 | 0.12 | 0.30 | 0.30 | 0.08 | 0.26 | 0.26 |
| Volume/Cap: | 0.89 | 0.50 | 0.50 | 1.95 | 0.37 | 0.48 | 1.95 | 1.73 | 0.90 | 0.57 | 1.56 | 0.80 |
| Delay/Veh: | 72.9 | 37.0 | 37.0 | 485.2 | 32.5 | 34.4 | 497.8 | 375 | 61.0 | 58.3 | 308 | 52.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 72.9 | 37.0 | 37.0 | 485.2 | 32.5 | 34.4 | 497.8 | 375 | 61.0 | 58.3 | 308 | 52.1 |
| LOS by Move: | E | D | D | F | C | C | F | F | E | E | F | D |
| HCM2kAvgQ: | 14 | 8 | 8 | 73 | 6 | 7 | 42 | 86 | 19 | 4 | 63 | 13 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.045 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 49.7 |
| Optimal Cycle: | 0 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 11 | 18 | 26 | 124 | 17 | 134 | 146 | 393 | 31 | 13 | 376 | 132 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 11 | 18 | 26 | 124 | 17 | 134 | 146 | 393 | 31 | 13 | 376 | 132 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 12 | 20 | 28 | 135 | 18 | 146 | 159 | 427 | 34 | 14 | 409 | 143 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 12 | 20 | 28 | 135 | 18 | 146 | 159 | 427 | 34 | 14 | 409 | 143 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 12 | 20 | 28 | 135 | 18 | 146 | 159 | 427 | 34 | 14 | 409 | 143 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.20 | 0.33 | 0.47 | 1.00 | 0.11 | 0.89 | 0.26 | 0.69 | 0.05 | 0.02 | 0.73 | 0.25 |
| Final Sat.: | 89 | 145 | 210 | 438 | 57 | 450 | 152 | 409 | 32 | 15 | 435 | 153 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.13 | 0.31 | 0.32 | 0.32 | 1.04 | 1.04 | 1.04 | 0.94 | 0.94 | 0.94 |
| Crit Moves: | | **** | | | | **** | | **** | | | | **** |
| Delay/Veh: | 11.9 | 11.9 | 11.9 | 14.3 | 12.9 | 12.9 | 73.1 | 73.1 | 73.1 | 47.1 | 47.1 | 47.1 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.9 | 11.9 | 11.9 | 14.3 | 12.9 | 12.9 | 73.1 | 73.1 | 73.1 | 47.1 | 47.1 | 47.1 |
| LOS by Move: | B | B | B | B | B | B | F | F | F | E | E | E |
| ApproachDel: | 11.9 | | | 13.5 | | | 73.1 | | | 47.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 11.9 | | | 13.5 | | | 73.1 | | | 47.1 | | |
| LOS by Appr: | B | | | B | | | F | | | E | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.1 | 0.4 | 0.5 | 0.5 | 10.6 | 10.6 | 10.6 | 6.4 | 6.4 | 6.4 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 461 | 1268 | 113 | 583 | 1237 | 622 | 144 | 745 | 708 | 708 | 727 | 662 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.95 | | 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) | 1805 | 5116 | | 3072 | 3410 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5116 | | 3072 | 3410 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| 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) | 501 | 1378 | 123 | 634 | 1345 | 676 | 157 | 810 | 770 | 770 | 790 | 720 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| Lane Group Flow (vph) | 501 | 1492 | 0 | 634 | 1967 | 0 | 157 | 810 | 770 | 770 | 790 | 640 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 12% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 5.0 | 43.0 | 43.0 | 5.0 | 43.0 | 43.0 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 5.0 | 43.0 | 43.0 | 5.0 | 43.0 | 43.0 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.04 | 0.37 | 0.37 | 0.04 | 0.37 | 0.37 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1801 | | 146 | 1206 | | 78 | 1349 | 530 | 78 | 1349 | 594 |
| v/s Ratio Prot | c0.28 | 0.29 | | 0.21 | c0.58 | | c0.09 | 0.22 | | c0.43 | 0.22 | |
| v/s Ratio Perm | | | | | | | | | c0.54 | | | 0.40 |
| v/c Ratio | 6.04 | 0.83 | | 4.34 | 1.63 | | 2.01 | 0.60 | 1.45 | 9.87 | 0.59 | 1.08 |
| Uniform Delay, d1 | 54.9 | 34.1 | | 54.8 | 37.1 | | 55.0 | 29.1 | 36.0 | 55.0 | 28.9 | 36.0 |
| Progression Factor | 1.00 | 1.00 | | 0.95 | 0.79 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2292.0 | 4.6 | | 1505.5 | 284.2 | | 497.8 | 0.5 | 214.1 | 4017.8 | 0.4 | 59.5 |
| Delay (s) | 2346.8 | 38.6 | | 1557.6 | 313.5 | | 552.8 | 29.6 | 250.1 | 4072.8 | 29.3 | 95.5 |
| Level of Service | F | D | | F | F | | F | C | F | F | C | F |
| Approach Delay (s) | | 616.3 | | | 610.6 | | | 174.6 | | | 1415.8 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 736.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.24 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 159.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 35 | 94 | 5 | 9 | 103 | 2040 | 143 | 58 | 1341 | 135 | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | |
| Initial Bse: | 5 | 5 | 35 | 94 | 5 | 9 | 103 | 2040 | 143 | 58 | 1341 | 135 | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | |
| PHF Volume: | 5 | 5 | 36 | 98 | 5 | 9 | 107 | 2118 | 148 | 60 | 1393 | 140 | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| FinalVolume: | 5 | 5 | 36 | 98 | 5 | 9 | 107 | 2118 | 148 | 60 | 1393 | 140 | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 3997 | 4060 | 2193 | 4010 | 4064 | 1463 | 1533 | xxxx | xxxxx | 2267 | xxxx | xxxxx | | | | | | | | |
| Potent Cap.: | 2 | 3 | 58 | 2 | 3 | 160 | 440 | xxxx | xxxxx | 229 | xxxx | xxxxx | | | | | | | | |
| Move Cap.: | 0 | 1 | 58 | 0 | 1 | 160 | 440 | xxxx | xxxxx | 229 | xxxx | xxxxx | | | | | | | | |
| Volume/Cap: | xxxx | 3.58 | 0.63 | xxxx | 3.60 | 0.06 | 0.24 | xxxx | xxxx | 0.26 | xxxx | xxxx | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 2.6 | xxxx | xxxx | 0.2 | 0.9 | xxxx | xxxxx | 1.0 | xxxx | xxxxx | | | | | | | | |
| Control Del: | xxxxx | xxxx | 139.8 | xxxxx | xxxx | 29.0 | 15.8 | xxxx | xxxxx | 26.3 | xxxx | xxxxx | | | | | | | | |
| LOS by Move: | * | * | F | * | * | D | C | * | * | D | * | * | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | 0 | xxxx | xxxxx | 0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | | |
| ApproachDel: | +Inf | | | +Inf | | | xxxxxx | | | xxxxxx | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 3.154
Loss Time (sec): 12 Average Delay (sec/veh): 576.6
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 0 | 1! | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 936 | 389 | 299 | 224 | 234 | 296 | 414 | 614 | 1066 | 263 | 456 | 182 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 936 | 389 | 299 | 224 | 234 | 296 | 414 | 614 | 1066 | 263 | 456 | 182 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 954 | 397 | 305 | 228 | 239 | 302 | 422 | 626 | 1087 | 268 | 465 | 186 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 954 | 397 | 305 | 228 | 239 | 302 | 422 | 626 | 1087 | 268 | 465 | 186 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 954 | 397 | 305 | 228 | 239 | 302 | 422 | 626 | 1087 | 268 | 465 | 186 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 1.00 | 0.85 | 0.51 | 0.51 | 0.85 | 0.23 | 0.23 | 0.23 |
| Lanes: | 1.00 | 0.57 | 0.43 | 1.00 | 1.00 | 1.00 | 0.40 | 0.60 | 1.00 | 0.29 | 0.51 | 0.20 |
| Final Sat.: | 1805 | 1004 | 772 | 1805 | 1900 | 1615 | 390 | 579 | 1615 | 126 | 219 | 87 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.53 | 0.39 | 0.39 | 0.13 | 0.13 | 0.19 | 1.08 | 1.08 | 0.67 | 2.12 | 2.12 | 2.12 |
| Crit Moves: | **** | | | | | **** | | | | | **** | |
| Green/Cycle: | 0.16 | 0.16 | 0.16 | 0.08 | 0.08 | 0.08 | 0.65 | 0.65 | 0.82 | 0.65 | 0.65 | 0.65 |
| Volume/Cap: | 3.25 | 2.42 | 2.42 | 1.52 | 1.51 | 2.24 | 1.65 | 1.65 | 0.82 | 3.25 | 3.25 | 3.25 |
| Delay/Veh: | 1070 | 702 | 701.9 | 319.1 | 313 | 637.1 | 322.0 | 322 | 10.5 | 1041 | 1041 | 1041 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 1070 | 702 | 701.9 | 319.1 | 313 | 637.1 | 322.0 | 322 | 10.5 | 1041 | 1041 | 1041 |
| LOS by Move: | F | F | F | F | F | F | F | F | B | F | F | F |
| HCM2kAvgQ: | 116 | 77 | 77 | 20 | 20 | 33 | 89 | 89 | 24 | 111 | 111 | 111 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 163 | 566 | 58 | 618 | 648 | 1043 | 153 | 295 | 534 | 887 | 222 | 161 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3128 | | 3242 | 1759 | 2796 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3128 | | 3242 | 1759 | 2796 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 173 | 602 | 62 | 657 | 689 | 1110 | 163 | 314 | 568 | 944 | 236 | 171 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 0 | 33 | 0 | 0 | 70 | 0 | 0 | 126 |
| Lane Group Flow (vph) | 173 | 657 | 0 | 657 | 689 | 1077 | 163 | 314 | 498 | 944 | 236 | 45 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 15% | 0% | 8% | 8% | 0% | 0% | 0% | 15% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 9.5 | 30.5 | | 25.3 | 45.6 | 76.0 | 13.8 | 14.7 | 40.0 | 30.4 | 31.3 | 31.3 |
| Effective Green, g (s) | 9.5 | 30.5 | | 25.3 | 45.6 | 76.0 | 13.8 | 14.7 | 40.0 | 30.4 | 31.3 | 31.3 |
| Actuated g/C Ratio | 0.08 | 0.25 | | 0.21 | 0.38 | 0.63 | 0.12 | 0.12 | 0.33 | 0.25 | 0.26 | 0.26 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 277 | 795 | | 683 | 668 | 1770 | 207 | 232 | 468 | 887 | 941 | 413 |
| v/s Ratio Prot | 0.05 | 0.21 | | 0.20 | c0.39 | 0.15 | 0.09 | c0.17 | c0.22 | c0.27 | 0.07 | |
| v/s Ratio Perm | | | | | | 0.23 | | | 0.13 | | | 0.03 |
| v/c Ratio | 0.62 | 0.83 | | 0.96 | 1.03 | 0.61 | 0.79 | 1.35 | 1.06 | 1.06 | 0.25 | 0.11 |
| Uniform Delay, d1 | 53.5 | 42.3 | | 46.9 | 37.2 | 13.1 | 51.7 | 52.6 | 40.0 | 44.8 | 35.1 | 33.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.1 | 6.7 | | 25.1 | 43.1 | 0.4 | 16.5 | 184.6 | 59.7 | 48.8 | 0.6 | 0.5 |
| Delay (s) | 56.7 | 49.0 | | 72.0 | 80.3 | 13.5 | 68.2 | 237.3 | 99.7 | 93.6 | 35.7 | 34.3 |
| Level of Service | E | D | | E | F | B | E | F | F | F | D | C |
| Approach Delay (s) | | 50.6 | | | 47.9 | | | 136.1 | | | 76.0 | |
| Approach LOS | | D | | | D | | | F | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 71.2 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.12 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 96.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 750 | 927 | 1007 | 382 | 1494 | 706 | 454 | 519 | 643 | 398 | 570 | 493 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.92 | | 1.00 | 0.95 | | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4562 | | 3502 | 3240 | | 1804 | 3280 | | 1804 | 3333 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.09 | 1.00 | | 0.09 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4562 | | 3502 | 3240 | | 177 | 3280 | | 177 | 3333 | |
| 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) | 815 | 1008 | 1095 | 415 | 1624 | 767 | 493 | 564 | 699 | 433 | 620 | 536 |
| RTOR Reduction (vph) | 0 | 60 | 0 | 0 | 49 | 0 | 0 | 141 | 0 | 0 | 106 | 0 |
| Lane Group Flow (vph) | 815 | 2043 | 0 | 415 | 2342 | 0 | 493 | 1122 | 0 | 433 | 1050 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 8% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1785 | | 319 | 1352 | | 66 | 1226 | | 66 | 1246 | |
| v/s Ratio Prot | c0.45 | 0.45 | | 0.12 | c0.72 | | | 0.34 | | | 0.32 | |
| v/s Ratio Perm | | | | | | | c2.79 | | | 2.45 | | |
| v/c Ratio | 6.97 | 1.60dr | | 1.30 | 1.73 | | 7.47 | 0.95dr | | 6.56 | 0.84 | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 34.3 | | 36.0 | 32.9 | |
| Progression Factor | 0.99 | 1.05 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2686.2 | 65.8 | | 156.5 | 332.7 | | 2942.5 | 10.4 | | 2534.0 | 5.1 | |
| Delay (s) | 2739.5 | 102.7 | | 208.8 | 366.2 | | 2978.5 | 44.7 | | 2570.0 | 38.1 | |
| Level of Service | F | F | | F | F | | F | D | | F | D | |
| Approach Delay (s) | | 839.2 | | | 342.9 | | | 868.4 | | | 728.0 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 671.8 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.62 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 181.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1604 | 453 | 622 | 1131 | 0 | 0 | 0 | 0 | 466 | 0 | 748 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 1743 | 492 | 676 | 1229 | 0 | 0 | 0 | 0 | 507 | 0 | 813 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 1743 | 492 | 676 | 1229 | 1320 |
| Volume Left (vph) | 0 | 0 | 676 | 0 | 507 |
| Volume Right (vph) | 0 | 492 | 0 | 0 | 813 |
| Hadj (s) | 0.05 | -0.48 | 0.62 | 0.07 | -0.23 |
| Departure Headway (s) | 7.1 | 3.2 | 8.2 | 7.7 | 6.8 |
| Degree Utilization, x | 3.46 | 0.44 | 1.54 | 2.61 | 2.48 |
| Capacity (veh/h) | 509 | 1115 | 443 | 482 | 545 |
| Control Delay (s) | 1125.1 | 8.7 | 274.5 | 747.4 | 685.5 |
| Approach Delay (s) | 879.2 | | 579.6 | | 685.5 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 727.9 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 228.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1240 | 747 | 780 | 1974 | 0 | 0 | 0 | 0 | 716 | 0 | 745 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.91 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1402 | 1434 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1402 | 1434 |
| 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) | 0 | 1348 | 812 | 848 | 2146 | 0 | 0 | 0 | 0 | 778 | 0 | 810 |
| RTOR Reduction (vph) | 0 | 0 | 306 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 1348 | 506 | 848 | 2146 | 0 | 0 | 0 | 0 | 552 | 478 | 446 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 4% | 4% | 3% | 0% | 0% | 0% | 0% | 12% | 0% | 7% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.40 | 0.40 | 0.23 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1371 | 625 | 777 | 2367 | | | | | 343 | 314 | 321 |
| v/s Ratio Prot | | c0.40 | | c0.25 | 0.61 | | | | | c0.36 | 0.34 | 0.31 |
| v/s Ratio Perm | | | 0.33 | | | | | | | | | |
| v/c Ratio | | 0.98 | 0.81 | 1.09 | 0.91 | | | | | 1.61 | 1.52 | 1.39 |
| Uniform Delay, d1 | | 32.5 | 29.1 | 42.3 | 14.9 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 20.6 | 10.9 | 60.1 | 6.4 | | | | | 287.4 | 250.9 | 193.6 |
| Delay (s) | | 53.1 | 40.0 | 102.4 | 21.4 | | | | | 330.1 | 293.6 | 236.2 |
| Level of Service | | D | D | F | C | | | | | F | F | F |
| Approach Delay (s) | | 48.2 | | | 44.3 | | | 0.0 | | | 288.1 | |
| Approach LOS | | D | | | D | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 103.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.17 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 160.1% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 809 | 365 | 277 | 907 | 0 | 0 | 0 | 0 | 350 | 0 | 586 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 879 | 397 | 301 | 986 | 0 | 0 | 0 | 0 | 380 | 0 | 637 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 986 | | | 1276 | | | 2786 | 2467 | 879 | 2467 | 2864 | 986 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 986 | | | 1276 | | | 2786 | 2467 | 879 | 2467 | 2864 | 986 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 43 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 709 | | | 524 | | | 0 | 13 | 349 | 8 | 7 | 303 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 879 | 397 | 301 | 986 | 1017 |
| Volume Left | 0 | 0 | 301 | 0 | 380 |
| Volume Right | 0 | 397 | 0 | 0 | 637 |
| cSH | 1700 | 1700 | 524 | 1700 | 20 |
| Volume to Capacity | 0.52 | 0.23 | 0.57 | 0.58 | 50.46 |
| Queue Length 95th (ft) | 0 | 0 | 90 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 20.7 | 0.0 | Err |
| Lane LOS | | | C | | F |
| Approach Delay (s) | 0.0 | | 4.8 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2843.0 | | |
| Intersection Capacity Utilization | 176.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 607 | 1463 | 0 | 0 | 1468 | 554 | 285 | 0 | 947 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 660 | 1590 | 0 | 0 | 1596 | 602 | 310 | 0 | 1029 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2198 | | | 1590 | | | 4807 | 5108 | 1590 | 5836 | 4807 | 1897 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2198 | | | 1590 | | | 4807 | 5108 | 1590 | 5836 | 4807 | 1897 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 228 | | | 418 | | | 0 | 0 | 134 | 0 | 0 | 88 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 660 | 1590 | 2198 | 1339 |
| Volume Left | 660 | 0 | 0 | 310 |
| Volume Right | 0 | 0 | 602 | 1029 |
| cSH | 228 | 1700 | 1700 | 0 |
| Volume to Capacity | 2.89 | 0.94 | 1.29 | Err |
| Queue Length 95th (ft) | 1455 | 0 | 0 | Err |
| Control Delay (s) | 894.6 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 262.3 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 228.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 326 | 1630 | 0 | 0 | 1797 | 665 | 958 | 0 | 857 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.93 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (prot) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1537 | 1490 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (perm) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1537 | 1490 | | | |
| 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) | 354 | 1772 | 0 | 0 | 1953 | 723 | 1041 | 0 | 932 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 445 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 354 | 1772 | 0 | 0 | 1953 | 278 | 687 | 598 | 560 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 13% | 7% | 0% | 0% | 4% | 7% | 1% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 361 | 2924 | | | 1623 | 482 | 466 | 421 | 408 | | | |
| v/s Ratio Prot | c0.22 | 0.37 | | | c0.39 | | c0.40 | 0.39 | 0.38 | | | |
| v/s Ratio Perm | | | | | | 0.19 | | | | | | |
| v/c Ratio | 0.98 | 0.61 | | | 1.20 | 0.58 | 1.47 | 1.42 | 1.37 | | | |
| Uniform Delay, d1 | 34.6 | 11.2 | | | 30.4 | 25.2 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 41.9 | 0.9 | | | 97.6 | 5.0 | 224.8 | 202.8 | 182.7 | | | |
| Delay (s) | 76.5 | 12.1 | | | 128.0 | 30.2 | 257.5 | 235.5 | 215.4 | | | |
| Level of Service | E | B | | | F | C | F | F | F | | | |
| Approach Delay (s) | | 22.8 | | | 101.6 | | | 236.8 | | | 0.0 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 116.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.23 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 160.1% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 740 | 419 | 0 | 0 | 768 | 141 | 416 | 0 | 501 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 804 | 455 | 0 | 0 | 835 | 153 | 452 | 0 | 545 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 988 | | | 455 | | | 2976 | 3052 | 455 | 3520 | 2976 | 911 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 988 | | | 455 | | | 2976 | 3052 | 455 | 3520 | 2976 | 911 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 11 | 0 | 0 | 100 |
| cM capacity (veh/h) | 688 | | | 1116 | | | 0 | 0 | 609 | 0 | 0 | 335 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 804 | 455 | 988 | 997 |
| Volume Left | 804 | 0 | 0 | 452 |
| Volume Right | 0 | 0 | 153 | 545 |
| cSH | 688 | 1700 | 1700 | 0 |
| Volume to Capacity | 1.17 | 0.27 | 0.58 | Err |
| Queue Length 95th (ft) | 653 | 0 | 0 | Err |
| Control Delay (s) | 113.3 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 72.4 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 176.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 144 | 97 | | 27 | | 13 | 185 | | 55 | | 112 | 344 | | 120 | | 46 | 355 | | 28 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Initial Bse: | 144 | 97 | | 27 | | 13 | 185 | | 55 | | 112 | 344 | | 120 | | 46 | 355 | | 28 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | |
| PHF Volume: | 157 | 105 | | 29 | | 14 | 201 | | 60 | | 122 | 374 | | 130 | | 50 | 386 | | 30 | |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | |
| FinalVolume: | 157 | 105 | | 29 | | 14 | 201 | | 60 | | 122 | 374 | | 130 | | 50 | 386 | | 30 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | | | 4.1 | xxxx | xxxxx | | | 7.1 | 6.5 | | 6.2 | | 7.1 | 6.5 | | 6.2 | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | | | 2.2 | xxxx | xxxxx | | | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 261 | xxxx | xxxxx | | | 135 | xxxx | xxxxx | | | 871 | 677 | | 201 | | 930 | 708 | | 105 | |
| Potent Cap.: | 1315 | xxxx | xxxxx | | | 1462 | xxxx | xxxxx | | | 274 | 377 | | 845 | | 250 | 362 | | 954 | |
| Move Cap.: | 1315 | xxxx | xxxxx | | | 1462 | xxxx | xxxxx | | | 0 | 325 | | 845 | | 0 | 312 | | 954 | |
| Volume/Cap: | 0.12 | xxxx | xxxx | | | 0.01 | xxxx | xxxx | | | xxxx | 1.15 | | 0.15 | | xxxx | 1.24 | | 0.03 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.4 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | |
| Control Del: | 8.1 | xxxx | xxxxx | | | 7.5 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| LOS by Move: | A | * | | * | | A | * | | * | | * | * | | * | | * | * | | * | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | | 0 | xxxxx | | xxxx | | 0 | xxxxx | |
| SharedQueue: | 0.4 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | | | 7.5 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| Shared LOS: | A | * | | * | | A | * | | * | | * | * | | * | | * | * | | * | |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | F | | | | | F | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 5 | 13 | 15 | 5 | 5 | 5 | 274 | 5 | 15 | 440 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 6 | 6 | 15 | 18 | 6 | 6 | 6 | 326 | 6 | 18 | 524 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 907 | 904 | 524 | 916 | 910 | 326 | 536 | | | 332 | | |
| vC1, stage 1 conf vol | 560 | 560 | | 338 | 338 | | | | | | | |
| vC2, stage 2 conf vol | 347 | 344 | | 578 | 571 | | | | | | | |
| vCu, unblocked vol | 907 | 904 | 524 | 916 | 910 | 326 | 536 | | | 332 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 99 | 99 | 97 | 96 | 99 | 99 | 99 | | | 99 | | |
| cM capacity (veh/h) | 444 | 446 | 557 | 426 | 442 | 720 | 1042 | | | 1239 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 27 | 30 | 6 | 326 | 6 | 18 | 524 | 12 |
| Volume Left | 6 | 18 | 6 | 0 | 0 | 18 | 0 | 0 |
| Volume Right | 15 | 6 | 0 | 0 | 6 | 0 | 0 | 12 |
| cSH | 502 | 468 | 1042 | 1700 | 1700 | 1239 | 1700 | 1700 |
| Volume to Capacity | 0.05 | 0.06 | 0.01 | 0.19 | 0.00 | 0.01 | 0.31 | 0.01 |
| Queue Length 95th (ft) | 4 | 5 | 0 | 0 | 0 | 1 | 0 | 0 |
| Control Delay (s) | 12.6 | 13.2 | 8.5 | 0.0 | 0.0 | 7.9 | 0.0 | 0.0 |
| Lane LOS | B | B | A | | | A | | |
| Approach Delay (s) | 12.6 | 13.2 | 0.1 | | | 0.3 | | |
| Approach LOS | B | B | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 33.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 5 | 7 | 36 | 5 | 5 | 5 | 274 | 3 | 66 | 397 | 5 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 7 | 7 | 9 | 49 | 7 | 7 | 7 | 370 | 4 | 89 | 536 | 7 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1109 | 1103 | 536 | 1111 | 1105 | 370 | 543 | | | 374 | | |
| vC1, stage 1 conf vol | 715 | 715 | | 384 | 384 | | | | | | | |
| vC2, stage 2 conf vol | 394 | 388 | | 728 | 722 | | | | | | | |
| vCu, unblocked vol | 1109 | 1103 | 536 | 1111 | 1105 | 370 | 543 | | | 374 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 98 | 98 | 98 | 86 | 98 | 99 | 99 | | | 93 | | |
| cM capacity (veh/h) | 343 | 354 | 548 | 337 | 360 | 680 | 1036 | | | 1195 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 23 | 62 | 7 | 370 | 4 | 89 | 536 | 7 |
| Volume Left | 7 | 49 | 7 | 0 | 0 | 89 | 0 | 0 |
| Volume Right | 9 | 7 | 0 | 0 | 4 | 0 | 0 | 7 |
| cSH | 410 | 359 | 1036 | 1700 | 1700 | 1195 | 1700 | 1700 |
| Volume to Capacity | 0.06 | 0.17 | 0.01 | 0.22 | 0.00 | 0.07 | 0.32 | 0.00 |
| Queue Length 95th (ft) | 4 | 15 | 0 | 0 | 0 | 6 | 0 | 0 |
| Control Delay (s) | 14.3 | 17.1 | 8.5 | 0.0 | 0.0 | 8.3 | 0.0 | 0.0 |
| Lane LOS | B | C | A | | | A | | |
| Approach Delay (s) | 14.3 | 17.1 | 0.2 | | | 1.2 | | |
| Approach LOS | B | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.0 | | |
| Intersection Capacity Utilization | 40.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 61 | 356 | 32 | 92 | 116 | 97 | 30 | 123 | 85 | 120 | 283 | 38 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 66 | 387 | 35 | 100 | 126 | 105 | 33 | 134 | 92 | 130 | 308 | 41 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1003 | 880 | 328 | 1062 | 855 | 180 | 349 | | | 226 | | |
| vC1, stage 1 conf vol | 589 | 589 | | 245 | 245 | | | | | | | |
| vC2, stage 2 conf vol | 414 | 291 | | 817 | 610 | | | | | | | |
| vCu, unblocked vol | 1003 | 880 | 328 | 1062 | 855 | 180 | 349 | | | 226 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 75 | 2 | 95 | 0 | 67 | 88 | 97 | | | 90 | | |
| cM capacity (veh/h) | 269 | 395 | 718 | 17 | 387 | 868 | 1221 | | | 1354 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 488 | 332 | 259 | 479 |
| Volume Left | 66 | 100 | 33 | 130 |
| Volume Right | 35 | 105 | 92 | 41 |
| cSH | 383 | 52 | 1221 | 1354 |
| Volume to Capacity | 1.27 | 6.43 | 0.03 | 0.10 |
| Queue Length 95th (ft) | 540 | Err | 2 | 8 |
| Control Delay (s) | 171.9 | Err | 1.2 | 2.9 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | 171.9 | Err | 1.2 | 2.9 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2183.1 | | |
| Intersection Capacity Utilization | 79.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.773 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 22.3 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 5 | 140 | 5 | 262 | 192 | 150 | 5 | 5 | 378 | 41 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 5 | 5 | 140 | 5 | 262 | 192 | 150 | 5 | 5 | 378 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 5 | 5 | 5 | 152 | 5 | 285 | 209 | 163 | 5 | 5 | 411 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 5 | 5 | 152 | 5 | 285 | 209 | 163 | 5 | 5 | 411 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 5 | 5 | 152 | 5 | 285 | 209 | 163 | 5 | 5 | 411 | 45 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.34 | 0.33 | 0.33 | 0.34 | 0.01 | 0.65 | 0.56 | 0.43 | 0.01 | 0.01 | 0.89 | 0.10 |
| Final Sat.: | 135 | 135 | 135 | 204 | 7 | 382 | 312 | 244 | 8 | 7 | 531 | 58 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.75 | 0.75 | 0.75 | 0.67 | 0.67 | 0.67 | 0.77 | 0.77 | 0.77 |
| Crit Moves: | **** | | | **** | | | | **** | | | **** | |
| Delay/Veh: | 10.4 | 10.4 | 10.4 | 22.5 | 22.5 | 22.5 | 19.7 | 19.7 | 19.7 | 24.7 | 24.7 | 24.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.4 | 10.4 | 10.4 | 22.5 | 22.5 | 22.5 | 19.7 | 19.7 | 19.7 | 24.7 | 24.7 | 24.7 |
| LOS by Move: | B | B | B | C | C | C | C | C | C | C | C | C |
| ApproachDel: | 10.4 | | | 22.5 | | | 19.7 | | | 24.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 10.4 | | | 22.5 | | | 19.7 | | | 24.7 | | |
| LOS by Appr: | B | | | C | | | C | | | C | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 2.2 | 2.2 | 2.2 | 1.6 | 1.6 | 1.6 | 2.6 | 2.6 | 2.6 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 353 | 567 | 647 | 192 | 167 | 262 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 384 | 616 | 703 | 209 | 182 | 285 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1939 | 324 | 466 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1939 | 324 | 466 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 15 | 36 | | | |
| cM capacity (veh/h) | 26 | 722 | 1106 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 384 | 616 | 912 | 466 |
| Volume Left | 384 | 0 | 703 | 0 |
| Volume Right | 0 | 616 | 0 | 285 |
| cSH | 26 | 722 | 1106 | 1700 |
| Volume to Capacity | 14.58 | 0.85 | 0.64 | 0.27 |
| Queue Length 95th (ft) | Err | 249 | 120 | 0 |
| Control Delay (s) | Err | 31.9 | 12.9 | 0.0 |
| Lane LOS | F | D | B | |
| Approach Delay (s) | 3856.2 | | 12.9 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1626.4 | | |
| Intersection Capacity Utilization | 100.3% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 250 | 1249 | 470 | 904 | 1684 | 515 | 320 | 175 | 426 | 555 | 242 | 578 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 0.89 | | 1.00 | 0.94 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3406 | 1587 | 1805 | 4946 | | 3502 | 3188 | | 1805 | 1671 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3406 | 1587 | 1805 | 4946 | | 3502 | 3188 | | 1805 | 1671 | 1513 |
| 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) | 272 | 1358 | 511 | 983 | 1830 | 560 | 348 | 190 | 463 | 603 | 263 | 628 |
| RTOR Reduction (vph) | 0 | 0 | 236 | 0 | 46 | 0 | 0 | 85 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 272 | 1358 | 275 | 983 | 2344 | 0 | 348 | 568 | 0 | 603 | 464 | 427 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 993 | 462 | 127 | 1525 | | 1079 | 982 | | 255 | 236 | 296 |
| v/s Ratio Prot | 0.08 | 0.40 | | c0.54 | c0.47 | | 0.10 | c0.18 | | c0.33 | 0.28 | 0.08 |
| v/s Ratio Perm | | | 0.17 | | | | | | | | | 0.20 |
| v/c Ratio | 1.44 | 1.37 | 0.60 | 7.74 | 1.54 | | 0.32 | 0.58 | | 2.36 | 1.97 | 1.44 |
| Uniform Delay, d1 | 56.8 | 42.5 | 36.4 | 55.8 | 41.5 | | 31.9 | 34.9 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 0.96 | 1.27 | 1.88 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 218.4 | 170.2 | 4.1 | 3049.3 | 245.1 | | 0.8 | 2.5 | | 626.1 | 449.7 | 217.3 |
| Delay (s) | 273.1 | 224.2 | 72.7 | 3105.0 | 286.6 | | 32.7 | 37.4 | | 677.6 | 501.2 | 265.6 |
| Level of Service | F | F | E | F | F | | C | D | | F | F | F |
| Approach Delay (s) | | 194.3 | | | 1108.0 | | | 35.8 | | | 505.1 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 617.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.88 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 164.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 604 | 1392 | 211 | 305 | 1398 | 396 | 319 | 390 | 365 | 442 | 303 | 399 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.93 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.97 | 1.00 |
| Satd. Flow (prot) | 3502 | 3269 | | 1805 | 3374 | 1586 | 1805 | 1748 | | | 1844 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.13 | 1.00 |
| Satd. Flow (perm) | 3502 | 3269 | | 1805 | 3374 | 1586 | 308 | 1748 | | | 245 | 1586 |
| 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) | 657 | 1513 | 229 | 332 | 1520 | 430 | 347 | 424 | 397 | 480 | 329 | 434 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 | 169 |
| Lane Group Flow (vph) | 657 | 1731 | 0 | 332 | 1520 | 361 | 347 | 789 | 0 | 0 | 809 | 265 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 9% | 0% | 0% | 7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.19 | 0.51 | | 0.10 | 0.42 | 0.42 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 680 | 1681 | | 178 | 1413 | 664 | 72 | 411 | | | 57 | 373 |
| v/s Ratio Prot | 0.19 | c0.53 | | c0.18 | 0.45 | | | 0.45 | | | | |
| v/s Ratio Perm | | | | | | 0.23 | 1.13 | | | | c3.30 | 0.17 |
| v/c Ratio | 0.97 | 1.03 | | 1.87 | 1.08 | 0.54 | 4.82 | 1.92 | | | 14.19 | 0.71 |
| Uniform Delay, d1 | 42.0 | 25.5 | | 47.3 | 30.5 | 22.9 | 40.1 | 40.1 | | | 40.1 | 36.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 26.1 | 29.9 | | 410.0 | 47.2 | 3.2 | 1749.7 | 422.7 | | | 5970.6 | 6.3 |
| Delay (s) | 68.0 | 55.4 | | 457.3 | 77.7 | 26.1 | 1789.9 | 462.8 | | | 6010.8 | 43.1 |
| Level of Service | E | E | | F | E | C | F | F | | | F | D |
| Approach Delay (s) | | 58.9 | | | 123.2 | | | 857.1 | | | 3927.1 | |
| Approach LOS | | E | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 889.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.73 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 163.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 493 | 36 | 32 | 41 | 95 | 283 | 22 | 298 | 21 | 81 | 550 | 188 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 536 | 39 | 35 | 45 | 103 | 308 | 24 | 324 | 23 | 88 | 598 | 204 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 610 | 455 | 371 | 890 |
| Volume Left (vph) | 536 | 45 | 24 | 88 |
| Volume Right (vph) | 35 | 308 | 23 | 204 |
| Hadj (s) | 0.14 | -0.39 | -0.02 | -0.12 |
| Departure Headway (s) | 9.7 | 9.1 | 9.5 | 9.4 |
| Degree Utilization, x | 1.0 | 1.0 | 0.98 | 1.0 |
| Capacity (veh/h) | 376 | 398 | 371 | 391 |
| Control Delay (s) | 322.1 | 124.6 | 73.6 | 624.9 |
| Approach Delay (s) | 322.1 | 124.6 | 73.6 | 624.9 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 359.7 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 131.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.270
Loss Time (sec): 12 Average Delay (sec/veh): 104.5
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 60 | 24 | 12 | 101 | 26 | 355 | 437 | 1963 | 54 | 17 | 2128 | 134 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 60 | 24 | 12 | 101 | 26 | 355 | 437 | 1963 | 54 | 17 | 2128 | 134 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 65 | 26 | 13 | 110 | 28 | 386 | 475 | 2134 | 59 | 18 | 2313 | 146 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 65 | 26 | 13 | 110 | 28 | 386 | 475 | 2134 | 59 | 18 | 2313 | 146 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 65 | 26 | 13 | 110 | 28 | 386 | 475 | 2134 | 59 | 18 | 2313 | 146 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.65 | 0.65 | 0.65 | 0.70 | 0.70 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.62 | 0.25 | 0.13 | 0.80 | 0.20 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 772 | 309 | 154 | 1052 | 271 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.08 | 0.08 | 0.10 | 0.10 | 0.24 | 0.26 | 0.59 | 0.04 | 0.01 | 0.64 | 0.09 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.21 | 0.62 | 0.62 | 0.09 | 0.50 | 0.50 |
| Volume/Cap: | 0.45 | 0.45 | 0.45 | 0.55 | 0.55 | 1.27 | 1.27 | 0.95 | 0.06 | 0.12 | 1.27 | 0.18 |
| Delay/Veh: | 44.6 | 44.6 | 44.6 | 46.9 | 46.9 | 193.5 | 188.5 | 30.2 | 8.8 | 50.8 | 156 | 16.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 44.6 | 44.6 | 44.6 | 46.9 | 46.9 | 193.5 | 188.5 | 30.2 | 8.8 | 50.8 | 156 | 16.3 |
| LOS by Move: | D | D | D | D | D | F | F | C | A | D | F | B |
| HCM2kAvgQ: | 4 | 4 | 4 | 5 | 5 | 27 | 32 | 43 | 1 | 1 | 77 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.916
Loss Time (sec): 12 Average Delay (sec/veh): 58.2
Optimal Cycle: OPTIMIZED Level Of Service: E

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 32 | 32 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 3 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 387 | 0 | 408 | 0 | 0 | 0 | 0 | 1620 | 352 | 366 | 1904 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 387 | 0 | 408 | 0 | 0 | 0 | 0 | 1620 | 352 | 366 | 1904 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 421 | 0 | 443 | 0 | 0 | 0 | 0 | 1761 | 383 | 398 | 2070 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 421 | 0 | 443 | 0 | 0 | 0 | 0 | 1761 | 383 | 398 | 2070 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 421 | 0 | 443 | 0 | 0 | 0 | 0 | 1761 | 383 | 398 | 2070 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1805 | 0 | 1615 | 0 | 0 | 0 | 0 | 5187 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.23 | 0.00 | 0.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.34 | 0.24 | 0.22 | 0.57 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.33 | 0.00 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.32 | 0.32 | 0.23 | 0.55 | 0.00 |
| Volume/Cap: | 0.71 | 0.00 | 0.83 | 0.00 | 0.00 | 0.00 | 0.00 | 1.06 | 0.74 | 0.96 | 1.04 | 0.00 |
| Delay/Veh: | 33.1 | 0.0 | 41.7 | 0.0 | 0.0 | 0.0 | 0.0 | 74.3 | 35.9 | 71.5 | 54.7 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 33.1 | 0.0 | 41.7 | 0.0 | 0.0 | 0.0 | 0.0 | 74.3 | 35.9 | 71.5 | 54.7 | 0.0 |
| LOS by Move: | C | A | D | A | A | A | A | E | D | E | D | A |
| HCM2kAvgQ: | 12 | 0 | 15 | 0 | 0 | 0 | 0 | 30 | 12 | 17 | 45 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 2.533
Loss Time (sec): 12 Average Delay (sec/veh): 312.7
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 1 | 0 | 1 0 | 0 0 | 1! 0 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 297 | 507 | 299 | 675 | 412 | 193 | 241 | 1605 | 345 | 213 | 1696 | 704 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 297 | 507 | 299 | 675 | 412 | 193 | 241 | 1605 | 345 | 213 | 1696 | 704 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 323 | 551 | 325 | 734 | 448 | 210 | 262 | 1745 | 375 | 232 | 1843 | 765 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 323 | 551 | 325 | 734 | 448 | 210 | 262 | 1745 | 375 | 232 | 1843 | 765 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 323 | 551 | 325 | 734 | 448 | 210 | 262 | 1745 | 375 | 232 | 1843 | 765 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.85 | 0.95 | 0.91 | 0.91 |
| Lanes: | 1.00 | 1.26 | 0.74 | 0.53 | 0.32 | 0.15 | 0.26 | 1.74 | 1.00 | 1.00 | 1.41 | 0.59 |
| Final Sat.: | 1708 | 2149 | 1268 | 956 | 584 | 273 | 247 | 1648 | 1615 | 1805 | 2439 | 1012 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.26 | 0.26 | 0.77 | 0.77 | 0.77 | 1.06 | 1.06 | 0.23 | 0.13 | 0.76 | 0.76 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.55 | 0.74 | 0.74 | xxxx | xxxx | xxxx | 2.85 | 2.85 | 0.62 | 1.00 | 1.51 | 1.51 |
| Delay/Veh: | 20.8 | 24.3 | 24.3 | 0.0 | 0.0 | 0.0 | 859.8 | 860 | 22.1 | 93.3 | 253 | 252.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 20.8 | 24.3 | 24.3 | 0.0 | 0.0 | 0.0 | 859.8 | 860 | 22.1 | 93.3 | 253 | 252.8 |
| LOS by Move: | C | C | C | A | A | A | F | F | C | F | F | F |
| HCM2kAvgQ: | 7 | 11 | 11 | 30 | 30 | 30 | 110 | 110 | 8 | 10 | 91 | 91 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.513
Loss Time (sec): 12 Average Delay (sec/veh): 217.3
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 274 | 31 | 267 | 371 | 25 | 78 | 226 | 1950 | 303 | 312 | 2271 | 120 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 274 | 31 | 267 | 371 | 25 | 78 | 226 | 1950 | 303 | 312 | 2271 | 120 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 298 | 34 | 290 | 403 | 27 | 85 | 246 | 2120 | 329 | 339 | 2468 | 130 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 298 | 34 | 290 | 403 | 27 | 85 | 246 | 2120 | 329 | 339 | 2468 | 130 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 298 | 34 | 290 | 403 | 27 | 85 | 246 | 2120 | 329 | 339 | 2468 | 130 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.66 | 0.87 | 0.87 | 0.39 | 0.89 | 0.89 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.10 | 0.90 | 1.00 | 0.24 | 0.76 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1262 | 171 | 1474 | 745 | 409 | 1275 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.24 | 0.20 | 0.20 | 0.54 | 0.07 | 0.07 | 0.14 | 0.59 | 0.20 | 0.19 | 0.68 | 0.08 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.09 | 0.41 | 0.41 | 0.13 | 0.45 | 0.45 |
| Volume/Cap: | 0.66 | 0.55 | 0.55 | 1.51 | 0.19 | 0.19 | 1.51 | 1.43 | 0.50 | 1.43 | 1.51 | 0.18 |
| Delay/Veh: | 36.0 | 31.9 | 31.9 | 287.6 | 26.6 | 26.6 | 314.3 | 233 | 26.8 | 268.1 | 267 | 19.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.0 | 31.9 | 31.9 | 287.6 | 26.6 | 26.6 | 314.3 | 233 | 26.8 | 268.1 | 267 | 19.7 |
| LOS by Move: | D | C | C | F | C | C | F | F | C | F | F | B |
| HCM2kAvgQ: | 10 | 10 | 10 | 33 | 3 | 3 | 21 | 82 | 9 | 27 | 101 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 2.185
Loss Time (sec): 16 Average Delay (sec/veh): 416.9
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 364 | 623 | 48 | 587 | 520 | 517 | 472 | 1578 | 343 | 75 | 1888 | 587 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 364 | 623 | 48 | 587 | 520 | 517 | 472 | 1578 | 343 | 75 | 1888 | 587 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 390 | 667 | 51 | 628 | 557 | 554 | 505 | 1690 | 367 | 80 | 2021 | 628 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 390 | 667 | 51 | 628 | 557 | 554 | 505 | 1690 | 367 | 80 | 2021 | 628 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 390 | 667 | 51 | 628 | 557 | 554 | 505 | 1690 | 367 | 80 | 2021 | 628 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.86 | 0.14 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3315 | 255 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.22 | 0.20 | 0.20 | 0.35 | 0.15 | 0.34 | 0.28 | 0.47 | 0.23 | 0.04 | 1.06 | 0.39 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.15 | 0.28 | 0.28 | 0.12 | 0.24 | 0.24 | 0.10 | 0.39 | 0.39 | 0.08 | 0.37 | 0.37 |
| Volume/Cap: | 1.41 | 0.73 | 0.73 | 2.86 | 0.63 | 1.41 | 2.86 | 1.21 | 0.59 | 0.53 | 2.86 | 1.05 |
| Delay/Veh: | 254.7 | 42.3 | 42.3 | 902.0 | 42.1 | 243.7 | 906.4 | 138 | 30.7 | 56.5 | 878 | 87.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 254.7 | 42.3 | 42.3 | 902.0 | 42.1 | 243.7 | 906.4 | 138 | 30.7 | 56.5 | 878 | 87.0 |
| LOS by Move: | F | D | D | F | D | F | F | F | C | E | F | F |
| HCM2kAvgQ: | 30 | 14 | 14 | 74 | 10 | 42 | 59 | 54 | 11 | 4 | 233 | 32 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.650 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 212.8 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 15 | 24 | 21 | 217 | 21 | 174 | 252 | 551 | 22 | 29 | 565 | 135 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 15 | 24 | 21 | 217 | 21 | 174 | 252 | 551 | 22 | 29 | 565 | 135 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 16 | 26 | 23 | 235 | 23 | 188 | 273 | 596 | 24 | 31 | 611 | 146 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 26 | 23 | 235 | 23 | 188 | 273 | 596 | 24 | 31 | 611 | 146 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 16 | 26 | 23 | 235 | 23 | 188 | 273 | 596 | 24 | 31 | 611 | 146 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.25 | 0.40 | 0.35 | 1.00 | 0.11 | 0.89 | 0.30 | 0.67 | 0.03 | 0.04 | 0.77 | 0.19 |
| Final Sat.: | 104 | 167 | 146 | 437 | 55 | 452 | 165 | 361 | 14 | 22 | 429 | 103 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | 0.16 | 0.54 | 0.42 | 0.42 | 1.65 | 1.65 | 1.65 | 1.43 | 1.43 | 1.43 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |
| Delay/Veh: | 13.0 | 13.0 | 13.0 | 20.0 | 14.8 | 14.8 | 318.0 | 318 | 318.0 | 220.6 | 221 | 220.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 13.0 | 13.0 | 13.0 | 20.0 | 14.8 | 14.8 | 318.0 | 318 | 318.0 | 220.6 | 221 | 220.6 |
| LOS by Move: | B | B | B | C | B | B | F | F | F | F | F | F |
| ApproachDel: | 13.0 | | | 17.5 | | | 318.0 | | | 220.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 13.0 | | | 17.5 | | | 318.0 | | | 220.6 | | |
| LOS by Appr: | B | | | C | | | F | | | F | | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.2 | 1.1 | 0.7 | 0.7 | 46.4 | 46.4 | 46.4 | 32.5 | 32.5 | 32.5 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 625 | 1222 | 102 | 973 | 1319 | 471 | 232 | 1105 | 679 | 704 | 862 | 591 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.96 | | 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) | 1805 | 5121 | | 3367 | 3453 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5121 | | 3367 | 3453 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 631 | 1234 | 103 | 983 | 1332 | 476 | 234 | 1116 | 686 | 711 | 871 | 597 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| Lane Group Flow (vph) | 631 | 1329 | 0 | 983 | 1777 | 0 | 234 | 1116 | 686 | 711 | 871 | 514 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 7.8 | 43.0 | 43.0 | 5.0 | 40.2 | 40.2 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 7.8 | 43.0 | 43.0 | 5.0 | 40.2 | 40.2 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.07 | 0.37 | 0.37 | 0.04 | 0.35 | 0.35 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1803 | | 161 | 1222 | | 122 | 1349 | 560 | 78 | 1261 | 555 |
| v/s Ratio Prot | c0.35 | 0.26 | | 0.29 | c0.51 | | c0.13 | 0.31 | | c0.39 | 0.24 | |
| v/s Ratio Perm | | | | | | | | | c0.46 | | | 0.32 |
| v/c Ratio | 7.60 | 0.74 | | 6.11 | 1.45 | | 1.92 | 0.83 | 1.23 | 9.12 | 0.69 | 0.93 |
| Uniform Delay, d1 | 54.9 | 32.6 | | 54.8 | 37.1 | | 53.6 | 32.6 | 36.0 | 55.0 | 32.1 | 36.0 |
| Progression Factor | 1.00 | 1.00 | | 0.91 | 0.71 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2995.8 | 2.7 | | 2298.7 | 204.8 | | 441.9 | 4.1 | 116.5 | 3677.7 | 1.3 | 21.2 |
| Delay (s) | 3050.7 | 35.3 | | 2348.4 | 231.1 | | 495.5 | 36.7 | 152.5 | 3732.7 | 33.4 | 57.1 |
| Level of Service | F | D | | F | F | | F | D | F | F | C | E |
| Approach Delay (s) | | 1002.1 | | | 976.8 | | | 128.5 | | | 1247.0 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 855.5 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.14 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 174.1% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 55 | 5 | 83 | 70 | 5 | 56 | 104 | 1997 | 109 | 32 | 2159 | 177 | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | |
| Initial Bse: | 55 | 5 | 83 | 70 | 5 | 56 | 104 | 1997 | 109 | 32 | 2159 | 177 | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | |
| PHF Volume: | 57 | 5 | 86 | 73 | 5 | 58 | 108 | 2072 | 113 | 33 | 2240 | 184 | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| FinalVolume: | 57 | 5 | 86 | 73 | 5 | 58 | 108 | 2072 | 113 | 33 | 2240 | 184 | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 4773 | 4834 | 2128 | 4787 | 4798 | 2331 | 2423 | xxxx | xxxxx | 2185 | xxxx | xxxxx | | | | | | | | |
| Potent Cap.: | 0 | 1 | 64 | 0 | 1 | 48 | 199 | xxxx | xxxxx | 246 | xxxx | xxxxx | | | | | | | | |
| Move Cap.: | 0 | 0 | 64 | 0 | 0 | 48 | 199 | xxxx | xxxxx | 246 | xxxx | xxxxx | | | | | | | | |
| Volume/Cap: | xxxx | 18.10 | 1.36 | xxxx | 17.10 | 1.22 | 0.54 | xxxx | xxxx | 0.13 | xxxx | xxxx | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 7.3 | xxxx | xxxx | 5.4 | 2.9 | xxxx | xxxxx | 0.5 | xxxx | xxxxx | | | | | | | | |
| Control Del: | xxxxx | xxxx | 344.1 | xxxxx | xxxx | 338.9 | 42.8 | xxxx | xxxxx | 21.9 | xxxx | xxxxx | | | | | | | | |
| LOS by Move: | * | * | F | * | * | F | E | * | * | C | * | * | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | 0 | xxxx | xxxxx | 0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | | |
| ApproachDel: | +Inf | | | +Inf | | | xxxxxx | | | xxxxxx | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 60 Critical Vol./Cap.(X): 12.948
Loss Time (sec): 12 Average Delay (sec/veh): 2430.9
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | | Include | | | Include | | | Ovl | | | Include | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1111 | 842 | 324 | 211 | 631 | 438 | 375 | 851 | 1003 | 522 | 755 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1111 | 842 | 324 | 211 | 631 | 438 | 375 | 851 | 1003 | 522 | 755 | 274 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 1188 | 901 | 347 | 226 | 675 | 468 | 401 | 910 | 1073 | 558 | 807 | 293 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1188 | 901 | 347 | 226 | 675 | 468 | 401 | 910 | 1073 | 558 | 807 | 293 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1188 | 901 | 347 | 226 | 675 | 468 | 401 | 910 | 1073 | 558 | 807 | 293 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.96 | 0.96 | 0.95 | 1.00 | 0.85 | 0.62 | 0.62 | 0.85 | 0.09 | 0.09 | 0.09 |
| Lanes: | 1.00 | 0.72 | 0.28 | 1.00 | 1.00 | 1.00 | 0.31 | 0.69 | 1.00 | 0.33 | 0.49 | 0.18 |
| Final Sat.: | 1805 | 1314 | 506 | 1805 | 1900 | 1615 | 361 | 819 | 1615 | 60 | 87 | 31 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.66 | 0.69 | 0.69 | 0.13 | 0.36 | 0.29 | 1.11 | 1.11 | 0.66 | 9.32 | 9.32 | 9.32 |
| Crit Moves: | | **** | | | **** | | | | | | **** | |
| Green/Cycle: | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.47 | 0.47 | 0.63 | 0.47 | 0.47 | 0.47 |
| Volume/Cap: | 3.95 | 4.11 | 4.11 | 0.75 | 2.13 | 1.74 | 2.38 | 2.38 | 1.05 | 19.97 | 19.97 | 19.97 |
| Delay/Veh: | 1360 | 1433 | 1433 | 33.9 | 545 | 373.2 | 643.2 | 643 | 52.8 | 8574 | 8574 | 8574 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 1360 | 1433 | 1433 | 33.9 | 545 | 373.2 | 643.2 | 643 | 52.8 | 8574 | 8574 | 8574 |
| LOS by Move: | F | F | F | C | F | F | F | F | D | F | F | F |
| HCM2kAvgQ: | 132 | 140 | 140 | 6 | 58 | 35 | 119 | 119 | 33 | 226 | 226 | 226 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 379 | 1128 | 212 | 602 | 907 | 1043 | 190 | 680 | 731 | 1150 | 691 | 97 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3428 | | 3367 | 1827 | 2797 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3428 | | 3367 | 1827 | 2797 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 408 | 1213 | 228 | 647 | 975 | 1122 | 204 | 731 | 786 | 1237 | 743 | 104 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 24 | 0 | 0 | 70 | 0 | 0 | 78 |
| Lane Group Flow (vph) | 408 | 1428 | 0 | 647 | 975 | 1098 | 204 | 731 | 716 | 1237 | 743 | 26 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 4% | 4% | 0% | 0% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.4 | 30.4 | | 25.4 | 44.7 | 75.1 | 15.0 | 14.7 | 40.1 | 30.4 | 30.1 | 30.1 |
| Effective Green, g (s) | 10.4 | 30.4 | | 25.4 | 44.7 | 75.1 | 15.0 | 14.7 | 40.1 | 30.4 | 30.1 | 30.1 |
| Actuated g/C Ratio | 0.09 | 0.25 | | 0.21 | 0.37 | 0.63 | 0.12 | 0.12 | 0.33 | 0.25 | 0.25 | 0.25 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 303 | 868 | | 712 | 680 | 1750 | 225 | 232 | 523 | 887 | 905 | 397 |
| v/s Ratio Prot | 0.12 | c0.42 | | 0.19 | c0.53 | 0.16 | 0.11 | c0.38 | c0.29 | c0.35 | 0.21 | |
| v/s Ratio Perm | | | | | | 0.23 | | | 0.17 | | | 0.02 |
| v/c Ratio | 1.35 | 1.65 | | 0.91 | 1.43 | 0.63 | 0.91 | 3.15 | 1.37 | 1.39 | 0.82 | 0.07 |
| Uniform Delay, d1 | 54.8 | 44.8 | | 46.2 | 37.6 | 13.8 | 51.8 | 52.6 | 40.0 | 44.8 | 42.4 | 34.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 176.4 | 295.7 | | 15.1 | 203.6 | 0.5 | 34.8 | 979.1 | 178.0 | 184.5 | 8.3 | 0.3 |
| Delay (s) | 231.2 | 340.5 | | 61.3 | 241.3 | 14.3 | 86.6 | 1031.8 | 218.0 | 229.3 | 50.7 | 34.6 |
| Level of Service | F | F | | E | F | B | F | F | F | F | D | C |
| Approach Delay (s) | | 316.4 | | | 106.0 | | | 548.1 | | | 155.9 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 255.3 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.73 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 143.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 809 | 1086 | 709 | 622 | 1765 | 266 | 301 | 956 | 643 | 485 | 750 | 696 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.98 | | 1.00 | 0.94 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4730 | | 3502 | 3441 | | 1805 | 3370 | | 1805 | 3323 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.09 | 1.00 | | 0.09 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4730 | | 3502 | 3441 | | 177 | 3370 | | 177 | 3323 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 861 | 1155 | 754 | 662 | 1878 | 283 | 320 | 1017 | 684 | 516 | 798 | 740 |
| RTOR Reduction (vph) | 0 | 30 | 0 | 0 | 10 | 0 | 0 | 101 | 0 | 0 | 105 | 0 |
| Lane Group Flow (vph) | 861 | 1879 | 0 | 662 | 2151 | 0 | 320 | 1600 | 0 | 516 | 1433 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1850 | | 319 | 1436 | | 66 | 1260 | | 66 | 1242 | |
| v/s Ratio Prot | c0.48 | 0.40 | | c0.19 | c0.62 | | | 0.47 | | | 0.43 | |
| v/s Ratio Perm | | | | | | | 1.81 | | | c2.92 | | |
| v/c Ratio | 7.36 | 1.15dr | | 2.08 | 1.50 | | 4.85 | 1.27 | | 7.82 | 1.15 | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Progression Factor | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2863.1 | 10.7 | | 494.5 | 227.6 | | 1765.5 | 127.7 | | 3099.1 | 78.9 | |
| Delay (s) | 2916.5 | 45.9 | | 546.8 | 261.1 | | 1801.5 | 163.7 | | 3135.1 | 114.9 | |
| Level of Service | F | D | | F | F | | F | F | | F | F | |
| Approach Delay (s) | | 938.2 | | | 328.1 | | | 423.0 | | | 873.6 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 638.6 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.74 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 195.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1896 | 596 | 763 | 1583 | 0 | 0 | 0 | 0 | 839 | 0 | 710 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 2061 | 648 | 829 | 1721 | 0 | 0 | 0 | 0 | 912 | 0 | 772 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 2061 | 648 | 829 | 1721 | 1684 |
| Volume Left (vph) | 0 | 0 | 829 | 0 | 912 |
| Volume Right (vph) | 0 | 648 | 0 | 0 | 772 |
| Hadj (s) | 0.05 | -0.57 | 0.64 | 0.02 | -0.07 |
| Departure Headway (s) | 7.1 | 3.2 | 8.2 | 7.6 | 6.9 |
| Degree Utilization, x | 4.08 | 0.58 | 1.89 | 3.63 | 3.23 |
| Capacity (veh/h) | 511 | 1118 | 444 | 479 | 525 |
| Control Delay (s) | 1407.6 | 10.4 | 428.7 | 1204.4 | 1024.9 |
| Approach Delay (s) | 1073.4 | | 952.1 | | 1024.9 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 1017.1 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 384.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1971 | 1037 | 668 | 2050 | 0 | 0 | 0 | 0 | 799 | 0 | 842 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.91 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1499 | 1504 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1499 | 1504 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 2075 | 1092 | 703 | 2158 | 0 | 0 | 0 | 0 | 841 | 0 | 886 |
| RTOR Reduction (vph) | 0 | 0 | 304 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 2075 | 788 | 703 | 2158 | 0 | 0 | 0 | 0 | 597 | 525 | 493 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 2% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 45.3 | 45.3 | 24.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 45.3 | 45.3 | 24.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.41 | 0.41 | 0.22 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1471 | 665 | 769 | 2414 | | | | | 377 | 336 | 337 |
| v/s Ratio Prot | | c0.58 | | 0.20 | c0.60 | | | | | c0.36 | 0.35 | 0.33 |
| v/s Ratio Perm | | | 0.49 | | | | | | | | | |
| v/c Ratio | | 1.41 | 1.18 | 0.91 | 0.89 | | | | | 1.58 | 1.56 | 1.46 |
| Uniform Delay, d1 | | 32.4 | 32.4 | 41.8 | 14.6 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 188.9 | 97.9 | 15.0 | 5.6 | | | | | 275.0 | 267.4 | 224.2 |
| Delay (s) | | 221.2 | 130.3 | 56.8 | 20.2 | | | | | 317.6 | 310.1 | 266.9 |
| Level of Service | | F | F | E | C | | | | | F | F | F |
| Approach Delay (s) | | 189.9 | | | 29.2 | | | 0.0 | | | 299.0 | |
| Approach LOS | | F | | | C | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 154.9 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.34 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 192.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 994 | 286 | 290 | 714 | 0 | 0 | 0 | 0 | 628 | 0 | 441 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 1080 | 311 | 315 | 776 | 0 | 0 | 0 | 0 | 683 | 0 | 479 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 776 | | | 1391 | | | 2727 | 2487 | 1080 | 2487 | 2798 | 776 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 776 | | | 1391 | | | 2727 | 2487 | 1080 | 2487 | 2798 | 776 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 36 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 849 | | | 492 | | | 0 | 11 | 267 | 9 | 7 | 394 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 1080 | 311 | 315 | 776 | 1162 |
| Volume Left | 0 | 0 | 315 | 0 | 683 |
| Volume Right | 0 | 311 | 0 | 0 | 479 |
| cSH | 1700 | 1700 | 492 | 1700 | 15 |
| Volume to Capacity | 0.64 | 0.18 | 0.64 | 0.46 | 78.31 |
| Queue Length 95th (ft) | 0 | 0 | 111 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 24.5 | 0.0 | Err |
| Lane LOS | | | C | | F |
| Approach Delay (s) | 0.0 | | 7.1 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3190.0 | | |
| Intersection Capacity Utilization | 181.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 770 | 1965 | 0 | 0 | 1943 | 551 | 403 | 0 | 741 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 837 | 2136 | 0 | 0 | 2112 | 599 | 438 | 0 | 805 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2711 | | | 2136 | | | 6221 | 6521 | 2136 | 7027 | 6221 | 2411 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2711 | | | 2136 | | | 6221 | 6521 | 2136 | 7027 | 6221 | 2411 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 147 | | | 257 | | | 0 | 0 | 63 | 0 | 0 | 43 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 837 | 2136 | 2711 | 1243 |
| Volume Left | 837 | 0 | 0 | 438 |
| Volume Right | 0 | 0 | 599 | 805 |
| cSH | 147 | 1700 | 1700 | 0 |
| Volume to Capacity | 5.68 | 1.26 | 1.59 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 2164.4 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 609.4 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 384.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 670 | 2100 | 0 | 0 | 1605 | 749 | 1113 | 0 | 909 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.94 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (prot) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1556 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (perm) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1556 | 1504 | | | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 691 | 2165 | 0 | 0 | 1655 | 772 | 1147 | 0 | 937 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 408 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 691 | 2165 | 0 | 0 | 1655 | 364 | 723 | 641 | 592 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 4% | 2% | 0% | 0% | 1% | 5% | 1% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 393 | 3067 | | | 1672 | 491 | 466 | 427 | 412 | | | |
| v/s Ratio Prot | c0.40 | 0.43 | | | c0.32 | | c0.43 | 0.41 | 0.39 | | | |
| v/s Ratio Perm | | | | | | 0.24 | | | | | | |
| v/c Ratio | 1.76 | 0.71 | | | 0.99 | 0.74 | 1.55 | 1.50 | 1.44 | | | |
| Uniform Delay, d1 | 34.8 | 12.3 | | | 30.2 | 27.0 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 351.5 | 1.4 | | | 19.7 | 9.7 | 258.6 | 237.7 | 210.2 | | | |
| Delay (s) | 386.3 | 13.7 | | | 49.9 | 36.7 | 291.3 | 270.3 | 242.9 | | | |
| Level of Service | F | B | | | D | D | F | F | F | | | |
| Approach Delay (s) | | 103.9 | | | 45.7 | | | 268.9 | | | 0.0 | |
| Approach LOS | | F | | | D | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 131.4 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.39 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 192.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 546 | 1076 | 0 | 0 | 604 | 415 | 400 | 0 | 337 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 593 | 1170 | 0 | 0 | 657 | 451 | 435 | 0 | 366 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1108 | | | 1170 | | | 3239 | 3464 | 1170 | 3605 | 3239 | 882 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1108 | | | 1170 | | | 3239 | 3464 | 1170 | 3605 | 3239 | 882 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 4 | | | 100 | | | 0 | 100 | 0 | 0 | 100 | 100 |
| cM capacity (veh/h) | 619 | | | 604 | | | 1 | 0 | 237 | 0 | 0 | 348 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 593 | 1170 | 1108 | 801 |
| Volume Left | 593 | 0 | 0 | 435 |
| Volume Right | 0 | 0 | 451 | 366 |
| cSH | 619 | 1700 | 1700 | 1 |
| Volume to Capacity | 0.96 | 0.69 | 0.65 | 578.37 |
| Queue Length 95th (ft) | 335 | 0 | 0 | Err |
| Control Delay (s) | 52.3 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 17.6 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2190.0 | | |
| Intersection Capacity Utilization | 181.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

```
------------------------------------------------------------------------------
                    LAKE ELSINORE WALMART TIA (JN 08651)
         General Plan Buildout (Post-2035) Without Project Conditions
                            Weekday PM Peak Hour
------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
******************************************************************************
Intersection #16 Dexter Avenue / 11th Street
******************************************************************************
Average Delay (sec/veh): OVERFLOW       Worst Case Level Of Service: F[xxxxx]
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  1  0  0  1    0  1  0  0  1    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     292  154    32    12   61    80    96  643   406    43  568    13
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  292  154    32    12   61    80    96  643   406    43  568    13
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   317  167    35    13   66    87   104  699   441    47  617    14
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:  317  167    35    13   66    87   104  699   441    47  617    14
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  153 xxxx xxxxx   202 xxxx xxxxx  1228  929    66  1508  982   167
Potent Cap.: 1440 xxxx xxxxx  1382 xxxx xxxxx   156  270  1003   100  251   882
Move Cap.:   1440 xxxx xxxxx  1382 xxxx xxxxx     0  196  1003     0  182   882
Volume/Cap:  0.22 xxxx  xxxx  0.01 xxxx  xxxx  xxxx 3.57  0.44  xxxx 3.39  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.8 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.2 xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx  xxxx    0 xxxxx
SharedQueue:  0.8 xxxx xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:  8.2 xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     A    *     *     A    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         *                *                F                F
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
```

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 5 | 43 | 42 | 5 | 5 | 30 | 205 | 28 | 14 | 586 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 6 | 6 | 50 | 49 | 6 | 6 | 35 | 238 | 33 | 16 | 681 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1031 | 1055 | 681 | 1075 | 1034 | 238 | 693 | | | 271 | | |
| vC1, stage 1 conf vol | 714 | 714 | | 308 | 308 | | | | | | | |
| vC2, stage 2 conf vol | 317 | 341 | | 767 | 726 | | | | | | | |
| vCu, unblocked vol | 1031 | 1055 | 681 | 1075 | 1034 | 238 | 693 | | | 271 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 98 | 98 | 89 | 83 | 98 | 99 | 96 | | | 99 | | |
| cM capacity (veh/h) | 380 | 387 | 454 | 295 | 365 | 806 | 912 | | | 1304 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 62 | 60 | 35 | 238 | 33 | 16 | 681 | 12 |
| Volume Left | 6 | 49 | 35 | 0 | 0 | 16 | 0 | 0 |
| Volume Right | 50 | 6 | 0 | 0 | 33 | 0 | 0 | 12 |
| cSH | 439 | 320 | 912 | 1700 | 1700 | 1304 | 1700 | 1700 |
| Volume to Capacity | 0.14 | 0.19 | 0.04 | 0.14 | 0.02 | 0.01 | 0.40 | 0.01 |
| Queue Length 95th (ft) | 12 | 17 | 3 | 0 | 0 | 1 | 0 | 0 |
| Control Delay (s) | 14.5 | 18.8 | 9.1 | 0.0 | 0.0 | 7.8 | 0.0 | 0.0 |
| Lane LOS | B | C | A | | | A | | |
| Approach Delay (s) | 14.5 | 18.8 | 1.0 | | | 0.2 | | |
| Approach LOS | B | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 47.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 10 | 5 | 25 | 69 | 5 | 14 | 25 | 238 | 28 | 109 | 552 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 12 | 6 | 30 | 82 | 6 | 17 | 30 | 283 | 33 | 130 | 657 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1279 | 1293 | 657 | 1292 | 1271 | 283 | 669 | | | 317 | | |
| vC1, stage 1 conf vol | 917 | 917 | | 343 | 343 | | | | | | | |
| vC2, stage 2 conf vol | 362 | 376 | | 949 | 929 | | | | | | | |
| vCu, unblocked vol | 1279 | 1293 | 657 | 1292 | 1271 | 283 | 669 | | | 317 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 96 | 98 | 94 | 63 | 98 | 98 | 97 | | | 90 | | |
| cM capacity (veh/h) | 266 | 283 | 468 | 221 | 269 | 760 | 931 | | | 1255 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 48 | 105 | 30 | 283 | 33 | 130 | 657 | 12 |
| Volume Left | 12 | 82 | 30 | 0 | 0 | 130 | 0 | 0 |
| Volume Right | 30 | 17 | 0 | 0 | 33 | 0 | 0 | 12 |
| cSH | 368 | 252 | 931 | 1700 | 1700 | 1255 | 1700 | 1700 |
| Volume to Capacity | 0.13 | 0.42 | 0.03 | 0.17 | 0.02 | 0.10 | 0.39 | 0.01 |
| Queue Length 95th (ft) | 11 | 48 | 2 | 0 | 0 | 9 | 0 | 0 |
| Control Delay (s) | 16.2 | 29.1 | 9.0 | 0.0 | 0.0 | 8.2 | 0.0 | 0.0 |
| Lane LOS | C | D | A | | | A | | |
| Approach Delay (s) | 16.2 | 29.1 | 0.8 | | | 1.3 | | |
| Approach LOS | C | D | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 54.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 65 | 184 | 30 | 139 | 543 | 30 | 34 | 197 | 208 | 211 | 322 | 113 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 71 | 200 | 33 | 151 | 590 | 33 | 37 | 214 | 226 | 229 | 350 | 123 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1599 | 1384 | 411 | 1404 | 1333 | 327 | 473 | | | 440 | | |
| vC1, stage 1 conf vol | 870 | 870 | | 401 | 401 | | | | | | | |
| vC2, stage 2 conf vol | 729 | 514 | | 1003 | 932 | | | | | | | |
| vCu, unblocked vol | 1599 | 1384 | 411 | 1404 | 1333 | 327 | 473 | | | 440 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 12 | 95 | 0 | 0 | 95 | 97 | | | 80 | | |
| cM capacity (veh/h) | 0 | 227 | 645 | 35 | 229 | 719 | 1100 | | | 1130 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 303 | 774 | 477 | 702 |
| Volume Left | 71 | 151 | 37 | 229 |
| Volume Right | 33 | 33 | 226 | 123 |
| cSH | 0 | 111 | 1100 | 1130 |
| Volume to Capacity | Err | 7.00 | 0.03 | 0.20 |
| Queue Length 95th (ft) | Err | Err | 3 | 19 |
| Control Delay (s) | Err | Err | 1.0 | 4.6 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | Err | Err | 1.0 | 4.6 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 118.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.717 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 188.7 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 5 | 93 | 5 | 393 | 333 | 484 | 5 | 5 | 378 | 101 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 5 | 5 | 93 | 5 | 393 | 333 | 484 | 5 | 5 | 378 | 101 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 5 | 5 | 5 | 101 | 5 | 427 | 362 | 526 | 5 | 5 | 411 | 110 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 5 | 5 | 101 | 5 | 427 | 362 | 526 | 5 | 5 | 411 | 110 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 5 | 5 | 101 | 5 | 427 | 362 | 526 | 5 | 5 | 411 | 110 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.34 | 0.33 | 0.33 | 0.19 | 0.01 | 0.80 | 0.40 | 0.59 | 0.01 | 0.01 | 0.78 | 0.21 |
| Final Sat.: | 133 | 133 | 133 | 105 | 6 | 444 | 211 | 306 | 3 | 6 | 417 | 112 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.96 | 0.96 | 0.96 | 1.72 | 1.72 | 1.72 | 0.98 | 0.98 | 0.98 |
| Crit Moves: | **** | | | **** | | | **** | | | | **** | |
| Delay/Veh: | 12.2 | 12.2 | 12.2 | 54.2 | 54.2 | 54.2 | 347.6 | 348 | 347.6 | 60.7 | 60.7 | 60.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 12.2 | 12.2 | 12.2 | 54.2 | 54.2 | 54.2 | 347.6 | 348 | 347.6 | 60.7 | 60.7 | 60.7 |
| LOS by Move: | B | B | B | F | F | F | F | F | F | F | F | F |
| ApproachDel: | 12.2 | | | 54.2 | | | 347.6 | | | 60.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 12.2 | | | 54.2 | | | 347.6 | | | 60.7 | | |
| LOS by Appr: | B | | | F | | | F | | | F | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 6.9 | 6.9 | 6.9 | 48.8 | 48.8 | 48.8 | 7.6 | 7.6 | 7.6 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 530 | 883 | 527 | 139 | 340 | 492 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 570 | 949 | 567 | 149 | 366 | 529 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1913 | 630 | 895 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1913 | 630 | 895 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 0 | 26 | | | |
| cM capacity (veh/h) | 20 | 485 | 767 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 570 | 949 | 716 | 895 |
| Volume Left | 570 | 0 | 567 | 0 |
| Volume Right | 0 | 949 | 0 | 529 |
| cSH | 20 | 485 | 767 | 1700 |
| Volume to Capacity | 28.89 | 1.96 | 0.74 | 0.53 |
| Queue Length 95th (ft) | Err | 1591 | 167 | 0 |
| Control Delay (s) | Err | 457.7 | 20.9 | 0.0 |
| Lane LOS | F | F | C | |
| Approach Delay (s) | 4036.5 | | 20.9 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1964.1 | | |
| Intersection Capacity Utilization | 123.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 467 | 1442 | 705 | 780 | 1624 | 723 | 442 | 320 | 739 | 624 | 541 | 587 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.90 | | 1.00 | 0.98 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 4854 | | 3502 | 3194 | | 1805 | 1772 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 4854 | | 3502 | 3194 | | 1805 | 1772 | 1513 |
| 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) | 508 | 1567 | 766 | 848 | 1765 | 786 | 480 | 348 | 803 | 678 | 588 | 638 |
| RTOR Reduction (vph) | 0 | 0 | 307 | 0 | 67 | 0 | 0 | 84 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 508 | 1567 | 459 | 848 | 2484 | 0 | 480 | 1067 | 0 | 678 | 658 | 568 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1496 | | 1079 | 984 | | 255 | 251 | 296 |
| v/s Ratio Prot | 0.15 | 0.44 | | c0.47 | c0.51 | | 0.14 | c0.33 | | c0.38 | 0.37 | 0.10 |
| v/s Ratio Perm | | | 0.29 | | | | | | | | | 0.27 |
| v/c Ratio | 2.69 | 1.52 | 0.99 | 6.68 | 1.66 | | 0.44 | 1.39dr | | 2.66 | 2.62 | 1.92 |
| Uniform Delay, d1 | 56.8 | 42.5 | 42.4 | 55.8 | 41.5 | | 33.3 | 41.5 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 0.95 | 1.24 | 1.62 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 768.8 | 236.4 | 31.6 | 2571.3 | 300.2 | | 1.3 | 54.2 | | 757.6 | 741.1 | 425.8 |
| Delay (s) | 822.9 | 289.1 | 100.4 | 2627.0 | 341.7 | | 34.6 | 95.7 | | 809.1 | 792.6 | 474.1 |
| Level of Service | F | F | F | F | F | | C | F | | F | F | F |
| Approach Delay (s) | | 333.7 | | | 911.8 | | | 77.7 | | | 703.5 | |
| Approach LOS | | F | | | F | | | E | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 564.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.08 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 169.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 488 | 1580 | 246 | 342 | 1213 | 486 | 193 | 436 | 504 | 425 | 496 | 550 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.98 | 1.00 |
| Satd. Flow (prot) | 3502 | 3434 | | 1805 | 3505 | 1586 | 1805 | 1731 | | | 1856 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.12 | 1.00 |
| Satd. Flow (perm) | 3502 | 3434 | | 1805 | 3505 | 1586 | 308 | 1731 | | | 225 | 1586 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 508 | 1646 | 256 | 356 | 1264 | 506 | 201 | 454 | 525 | 443 | 517 | 573 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 0 | 68 | 0 | 40 | 0 | 0 | 0 | 188 |
| Lane Group Flow (vph) | 508 | 1890 | 0 | 356 | 1264 | 438 | 201 | 939 | 0 | 0 | 960 | 385 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 19.0 | 54.0 | | 10.4 | 45.4 | 45.4 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 19.0 | 54.0 | | 10.4 | 45.4 | 45.4 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.18 | 0.51 | | 0.10 | 0.43 | 0.43 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 633 | 1766 | | 178 | 1515 | 685 | 72 | 407 | | | 52 | 373 |
| v/s Ratio Prot | 0.15 | c0.55 | | c0.20 | 0.36 | | | 0.54 | | | | |
| v/s Ratio Perm | | | | | | 0.28 | 0.65 | | | | c4.27 | 0.24 |
| v/c Ratio | 0.80 | 1.07 | | 2.00 | 0.83 | 0.64 | 2.79 | 2.31 | | | 18.46 | 1.03 |
| Uniform Delay, d1 | 41.2 | 25.5 | | 47.3 | 26.5 | 23.4 | 40.1 | 40.1 | | | 40.1 | 40.1 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 7.3 | 43.1 | | 469.4 | 5.6 | 4.5 | 843.5 | 596.2 | | | 7894.1 | 55.0 |
| Delay (s) | 48.5 | 68.6 | | 516.7 | 32.0 | 27.9 | 883.6 | 636.3 | | | 7934.3 | 95.2 |
| Level of Service | D | E | | F | C | C | F | F | | | F | F |
| Approach Delay (s) | | 64.3 | | | 112.2 | | | 678.4 | | | 5004.2 | |
| Approach LOS | | E | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 1223.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 5.91 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 191.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 475 | 83 | 45 | 29 | 107 | 204 | 45 | 642 | 49 | 256 | 368 | 560 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 516 | 90 | 49 | 32 | 116 | 222 | 49 | 698 | 53 | 278 | 400 | 609 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 655 | 370 | 800 | 1287 |
| Volume Left (vph) | 516 | 32 | 49 | 278 |
| Volume Right (vph) | 49 | 222 | 53 | 609 |
| Hadj (s) | 0.11 | -0.34 | -0.03 | -0.24 |
| Departure Headway (s) | 9.5 | 9.2 | 9.4 | 9.2 |
| Degree Utilization, x | 1.0 | 0.95 | 1.0 | 1.0 |
| Capacity (veh/h) | 382 | 385 | 389 | 395 |
| Control Delay (s) | 365.4 | 64.1 | 520.0 | 1053.6 |
| Approach Delay (s) | 365.4 | 64.1 | 520.0 | 1053.6 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 654.0 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 173.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.412
Loss Time (sec): 12 Average Delay (sec/veh): 209.4
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 63 | 39 | 26 | 188 | 33 | 484 | 516 | 3046 | 70 | 18 | 2391 | 158 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 63 | 39 | 26 | 188 | 33 | 484 | 516 | 3046 | 70 | 18 | 2391 | 158 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 64 | 40 | 26 | 191 | 34 | 493 | 525 | 3102 | 71 | 18 | 2435 | 161 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 64 | 40 | 26 | 191 | 34 | 493 | 525 | 3102 | 71 | 18 | 2435 | 161 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 64 | 40 | 26 | 191 | 34 | 493 | 525 | 3102 | 71 | 18 | 2435 | 161 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.55 | 0.55 | 0.55 | 0.64 | 0.64 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.50 | 0.30 | 0.20 | 0.85 | 0.15 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 510 | 316 | 211 | 1030 | 181 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.13 | 0.19 | 0.19 | 0.31 | 0.29 | 0.86 | 0.04 | 0.01 | 0.67 | 0.10 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.21 | 0.60 | 0.60 | 0.08 | 0.48 | 0.48 |
| Volume/Cap: | 0.58 | 0.58 | 0.58 | 0.86 | 0.86 | 1.41 | 1.41 | 1.43 | 0.07 | 0.12 | 1.41 | 0.21 |
| Delay/Veh: | 46.0 | 46.0 | 46.0 | 69.1 | 69.1 | 248.7 | 248.3 | 221 | 10.0 | 51.3 | 220 | 18.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.0 | 46.0 | 46.0 | 69.1 | 69.1 | 248.7 | 248.3 | 221 | 10.0 | 51.3 | 220 | 18.3 |
| LOS by Move: | D | D | D | E | E | F | F | F | B | D | F | B |
| HCM2kAvgQ: | 5 | 5 | 5 | 11 | 11 | 37 | 40 | 119 | 1 | 1 | 93 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.273
Loss Time (sec): 12 Average Delay (sec/veh): 109.4
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 32 | 32 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 3 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 454 | 0 | 570 | 0 | 0 | 0 | 0 | 2741 | 640 | 438 | 1908 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 454 | 0 | 570 | 0 | 0 | 0 | 0 | 2741 | 640 | 438 | 1908 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 463 | 0 | 581 | 0 | 0 | 0 | 0 | 2794 | 652 | 446 | 1945 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 463 | 0 | 581 | 0 | 0 | 0 | 0 | 2794 | 652 | 446 | 1945 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 463 | 0 | 581 | 0 | 0 | 0 | 0 | 2794 | 652 | 446 | 1945 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1805 | 0 | 1615 | 0 | 0 | 0 | 0 | 5187 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.26 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.54 | 0.40 | 0.25 | 0.54 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.28 | 0.00 | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 | 0.42 | 0.19 | 0.62 | 0.00 |
| Volume/Cap: | 0.91 | 0.00 | 1.27 | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.95 | 1.27 | 0.87 | 0.00 |
| Delay/Veh: | 61.4 | 0.0 | 182.2 | 0.0 | 0.0 | 0.0 | 0.0 | 161 | 57.3 | 191.7 | 23.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 61.4 | 0.0 | 182.2 | 0.0 | 0.0 | 0.0 | 0.0 | 161 | 57.3 | 191.7 | 23.2 | 0.0 |
| LOS by Move: | E | A | F | A | A | A | A | F | E | F | C | A |
| HCM2kAvgQ: | 20 | 0 | 39 | 0 | 0 | 0 | 0 | 66 | 28 | 30 | 34 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 3.495
Loss Time (sec): 12 Average Delay (sec/veh): 543.3
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 | 1 0 | 1 0 | 0 | 0 | 1! 0 | 0 | 1 | 1 0 | 1 | 0 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 301 | 745 | 272 | 475 | 994 | 273 | 358 | 2493 | 429 | 356 | 1888 | 544 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 301 | 745 | 272 | 475 | 994 | 273 | 358 | 2493 | 429 | 356 | 1888 | 544 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 315 | 779 | 285 | 497 | 1040 | 286 | 374 | 2608 | 449 | 372 | 1975 | 569 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 315 | 779 | 285 | 497 | 1040 | 286 | 374 | 2608 | 449 | 372 | 1975 | 569 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 315 | 779 | 285 | 497 | 1040 | 286 | 374 | 2608 | 449 | 372 | 1975 | 569 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 0.91 | 0.91 | 0.97 | 0.97 | 0.97 | 0.50 | 0.50 | 0.85 | 0.95 | 0.92 | 0.92 |
| Lanes: | 1.00 | 1.47 | 0.53 | 0.27 | 0.57 | 0.16 | 0.25 | 1.75 | 1.00 | 1.00 | 1.55 | 0.45 |
| Final Sat.: | 1730 | 2534 | 925 | 501 | 1048 | 288 | 238 | 1654 | 1615 | 1805 | 2707 | 780 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.18 | 0.31 | 0.31 | 0.99 | 0.99 | 0.99 | 1.58 | 1.58 | 0.28 | 0.21 | 0.73 | 0.73 |
| Crit Moves: | **** | | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.53 | 0.89 | 0.89 | xxxx | xxxx | xxxx | 4.24 | 4.24 | 0.75 | 1.61 | 1.46 | 1.46 |
| Delay/Veh: | 20.6 | 30.8 | 30.8 | 0.0 | 0.0 | 0.0 | 1486 | 1486 | 26.5 | 327.4 | 229 | 229.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 20.6 | 30.8 | 30.8 | 0.0 | 0.0 | 0.0 | 1486 | 1486 | 26.5 | 327.4 | 229 | 229.3 |
| LOS by Move: | C | C | C | A | A | A | F | F | C | F | F | F |
| HCM2kAvgQ: | 7 | 17 | 17 | 39 | 39 | 39 | 185 | 185 | 11 | 28 | 85 | 85 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.538
Loss Time (sec): 12 Average Delay (sec/veh): 218.7
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 251 | 32 | 375 | 51 | 25 | 199 | 32 | 2713 | 337 | 392 | 2148 | 190 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 251 | 32 | 375 | 51 | 25 | 199 | 32 | 2713 | 337 | 392 | 2148 | 190 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 273 | 35 | 408 | 55 | 27 | 216 | 35 | 2949 | 366 | 426 | 2335 | 207 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 273 | 35 | 408 | 55 | 27 | 216 | 35 | 2949 | 366 | 426 | 2335 | 207 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 273 | 35 | 408 | 55 | 27 | 216 | 35 | 2949 | 366 | 426 | 2335 | 207 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.43 | 0.86 | 0.86 | 0.15 | 0.87 | 0.87 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.08 | 0.92 | 1.00 | 0.11 | 0.89 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 825 | 129 | 1509 | 281 | 184 | 1463 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.33 | 0.27 | 0.27 | 0.20 | 0.15 | 0.15 | 0.02 | 0.82 | 0.23 | 0.24 | 0.65 | 0.13 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.08 | 0.48 | 0.48 | 0.14 | 0.53 | 0.53 |
| Volume/Cap: | 1.17 | 0.95 | 0.95 | 0.70 | 0.52 | 0.52 | 0.23 | 1.71 | 0.47 | 1.71 | 1.21 | 0.24 |
| Delay/Veh: | 154.7 | 72.3 | 72.3 | 61.9 | 37.2 | 37.2 | 52.2 | 352 | 21.6 | 386.6 | 129 | 15.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 154.7 | 72.3 | 72.3 | 61.9 | 37.2 | 37.2 | 52.2 | 352 | 21.6 | 386.6 | 129 | 15.1 |
| LOS by Move: | F | E | E | E | D | D | D | F | C | F | F | B |
| HCM2kAvgQ: | 18 | 21 | 21 | 3 | 8 | 8 | 1 | 134 | 9 | 38 | 73 | 4 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 120  Critical Vol./Cap.(X): 1.799
Loss Time (sec): 16  Average Delay (sec/veh): 308.5
Optimal Cycle: OPTIMIZED  Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 295 | 426 | 98 | 547 | 475 | 448 | 402 | 1091 | 301 | 88 | 1600 | 473 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 295 | 426 | 98 | 547 | 475 | 448 | 402 | 1091 | 301 | 88 | 1600 | 473 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 303 | 438 | 101 | 562 | 488 | 460 | 413 | 1121 | 309 | 90 | 1644 | 486 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 303 | 438 | 101 | 562 | 488 | 460 | 413 | 1121 | 309 | 90 | 1644 | 486 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 303 | 438 | 101 | 562 | 488 | 460 | 413 | 1121 | 309 | 90 | 1644 | 486 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.63 | 0.37 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2853 | 656 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.17 | 0.15 | 0.15 | 0.31 | 0.14 | 0.29 | 0.23 | 0.31 | 0.19 | 0.05 | 0.87 | 0.30 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.15 | 0.28 | 0.28 | 0.13 | 0.26 | 0.26 | 0.10 | 0.36 | 0.36 | 0.10 | 0.36 | 0.36 |
| Volume/Cap: | 1.12 | 0.56 | 0.56 | 2.38 | 0.53 | 1.12 | 2.38 | 0.86 | 0.53 | 0.51 | 2.38 | 0.83 |
| Delay/Veh: | 140.3 | 38.0 | 38.0 | 684.2 | 39.0 | 124.3 | 690.8 | 41.0 | 31.0 | 54.1 | 662 | 44.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 140.3 | 38.0 | 38.0 | 684.2 | 39.0 | 124.3 | 690.8 | 41.0 | 31.0 | 54.1 | 662 | 44.1 |
| LOS by Move: | F | D | D | F | D | F | F | D | C | D | F | D |
| HCM2kAvgQ: | 19 | 9 | 9 | 61 | 8 | 26 | 45 | 23 | 9 | 4 | 176 | 18 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.349 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 117.9 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 38 | 12 | 176 | 25 | 167 | 243 | 452 | 40 | 23 | 500 | 113 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 38 | 12 | 176 | 25 | 167 | 243 | 452 | 40 | 23 | 500 | 113 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 17 | 39 | 12 | 180 | 26 | 171 | 248 | 462 | 41 | 24 | 511 | 116 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 17 | 39 | 12 | 180 | 26 | 171 | 248 | 462 | 41 | 24 | 511 | 116 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 17 | 39 | 12 | 180 | 26 | 171 | 248 | 462 | 41 | 24 | 511 | 116 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.25 | 0.57 | 0.18 | 1.00 | 0.13 | 0.87 | 0.33 | 0.62 | 0.05 | 0.03 | 0.79 | 0.18 |
| Final Sat.: | 107 | 239 | 75 | 436 | 65 | 437 | 184 | 343 | 30 | 21 | 447 | 101 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | 0.16 | 0.41 | 0.39 | 0.39 | 1.35 | 1.35 | 1.35 | 1.14 | 1.14 | 1.14 |
| Crit Moves: | **** | | | **** | | | | **** | | | **** | |
| Delay/Veh: | 12.9 | 12.9 | 12.9 | 16.6 | 14.3 | 14.3 | 188.3 | 188 | 188.3 | 107.0 | 107 | 107.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 12.9 | 12.9 | 12.9 | 16.6 | 14.3 | 14.3 | 188.3 | 188 | 188.3 | 107.0 | 107 | 107.0 |
| LOS by Move: | B | B | B | C | B | B | F | F | F | F | F | F |
| ApproachDel: | 12.9 | | | 15.4 | | | 188.3 | | | 107.0 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 12.9 | | | 15.4 | | | 188.3 | | | 107.0 | | |
| LOS by Appr: | B | | | C | | | F | | | F | | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.2 | 0.7 | 0.6 | 0.6 | 27.7 | 27.7 | 27.7 | 15.4 | 15.4 | 15.4 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 554 | 1213 | 74 | 860 | 1046 | 457 | 245 | 933 | 969 | 775 | 633 | 422 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.95 | | 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) | 1805 | 5137 | | 3433 | 3428 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5137 | | 3433 | 3428 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 583 | 1277 | 78 | 905 | 1101 | 481 | 258 | 982 | 1020 | 816 | 666 | 444 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 583 | 1349 | 0 | 905 | 1539 | 0 | 258 | 982 | 1020 | 816 | 666 | 350 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 16.5 | 43.0 | 43.0 | 5.0 | 31.5 | 31.5 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 16.5 | 43.0 | 43.0 | 5.0 | 31.5 | 31.5 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.14 | 0.37 | 0.37 | 0.04 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1809 | | 164 | 1213 | | 258 | 1349 | 571 | 78 | 988 | 435 |
| v/s Ratio Prot | c0.32 | 0.26 | | 0.26 | c0.45 | | 0.14 | 0.27 | | c0.45 | 0.18 | |
| v/s Ratio Perm | | | | | | | | | c0.67 | | | 0.22 |
| v/c Ratio | 7.02 | 0.75 | | 5.52 | 1.27 | | 1.00 | 0.73 | 1.79 | 10.46 | 0.67 | 0.80 |
| Uniform Delay, d1 | 54.9 | 32.7 | | 54.8 | 37.1 | | 49.2 | 31.0 | 36.0 | 55.0 | 37.2 | 38.9 |
| Progression Factor | 1.00 | 1.00 | | 0.88 | 0.67 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2735.9 | 2.8 | | 2034.4 | 121.7 | | 56.0 | 1.7 | 360.9 | 4283.1 | 1.4 | 9.8 |
| Delay (s) | 2790.7 | 35.6 | | 2082.4 | 146.5 | | 105.3 | 32.7 | 396.9 | 4338.1 | 38.6 | 48.6 |
| Level of Service | F | D | | F | F | | F | C | F | F | D | D |
| Approach Delay (s) | | 864.4 | | | 850.9 | | | 205.3 | | | 1862.5 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 910.8 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.31 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 162.2% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 105 | 5 | 71 | 25 | 5 | 67 | 131 | 1327 | 171 | 26 | 1882 | 27 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 105 | 5 | 71 | 25 | 5 | 67 | 131 | 1327 | 171 | 26 | 1882 | 27 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | | | | | | | | | |
| PHF Volume: | 114 | 5 | 77 | 27 | 5 | 73 | 142 | 1441 | 186 | 28 | 2043 | 29 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| FinalVolume: | 114 | 5 | 77 | 27 | 5 | 73 | 142 | 1441 | 186 | 28 | 2043 | 29 | | | | | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 3972 | 3947 | 1534 | 3974 | 4026 | 2058 | 2073 | xxxx | xxxxx | 1626 | xxxx | xxxxx | | | | | | | | | | | | |
| Potent Cap.: | 2 | 3 | 145 | 2 | 3 | 70 | 272 | xxxx | xxxxx | 405 | xxxx | xxxxx | | | | | | | | | | | | |
| Move Cap.: | 0 | 1 | 145 | 0 | 1 | 70 | 272 | xxxx | xxxxx | 405 | xxxx | xxxxx | | | | | | | | | | | | |
| Volume/Cap: | xxxx | 4.21 | 0.53 | xxxx | 4.75 | 1.04 | 0.52 | xxxx | xxxx | 0.07 | xxxx | xxxx | | | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 2.6 | xxxx | xxxx | 5.4 | 2.8 | xxxx | xxxxx | 0.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Control Del: | xxxxx | xxxx | 55.1 | xxxxx | xxxx | 220.2 | 31.8 | xxxx | xxxxx | 14.6 | xxxx | xxxxx | | | | | | | | | | | | |
| LOS by Move: | * | * | F | * | * | F | D | * | * | B | * | * | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 0 | xxxx | xxxxx | 0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | | | | | | |
| ApproachDel: | +Inf | | | +Inf | | | xxxxxx | | | xxxxxx | | | | | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 120  Critical Vol./Cap.(X): 4.475
Loss Time (sec): 12  Average Delay (sec/veh): 1136.8
Optimal Cycle: OPTIMIZED  Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1115 | 881 | 222 | 372 | 688 | 289 | 175 | 675 | 917 | 410 | 863 | 343 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1115 | 881 | 222 | 372 | 688 | 289 | 175 | 675 | 917 | 410 | 863 | 343 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 1208 | 954 | 241 | 403 | 745 | 313 | 190 | 731 | 993 | 444 | 935 | 372 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1208 | 954 | 241 | 403 | 745 | 313 | 190 | 731 | 993 | 444 | 935 | 372 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1208 | 954 | 241 | 403 | 745 | 313 | 190 | 731 | 993 | 444 | 935 | 372 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 0.85 | 0.50 | 0.50 | 0.85 | 0.31 | 0.31 | 0.31 |
| Lanes: | 1.00 | 0.80 | 0.20 | 1.00 | 1.00 | 1.00 | 0.21 | 0.79 | 1.00 | 0.25 | 0.54 | 0.21 |
| Final Sat.: | 1805 | 1472 | 371 | 1805 | 1900 | 1615 | 194 | 750 | 1615 | 150 | 315 | 125 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.67 | 0.65 | 0.65 | 0.22 | 0.39 | 0.19 | 0.98 | 0.98 | 0.62 | 2.97 | 2.97 | 2.97 |
| Crit Moves: | **** | | | | **** | | | | | | **** | |
| Green/Cycle: | 0.15 | 0.15 | 0.15 | 0.09 | 0.09 | 0.09 | 0.66 | 0.66 | 0.81 | 0.66 | 0.66 | 0.66 |
| Volume/Cap: | 4.47 | 4.34 | 4.34 | 2.55 | 4.47 | 2.21 | 1.47 | 1.47 | 0.76 | 4.47 | 4.47 | 4.47 |
| Delay/Veh: | 1623 | 1560 | 1560 | 769.0 | 1632 | 622.1 | 241.0 | 241 | 8.1 | 1590 | 1590 | 1590 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 1623 | 1560 | 1560 | 769.0 | 1632 | 622.1 | 241.0 | 241 | 8.1 | 1590 | 1590 | 1590 |
| LOS by Move: | F | F | F | F | F | F | F | F | A | F | F | F |
| HCM2kAvgQ: | 159 | 156 | 156 | 46 | 98 | 34 | 70 | 70 | 19 | 230 | 230 | 230 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 405 | 1092 | 237 | 316 | 1026 | 1027 | 179 | 510 | 165 | 1137 | 480 | 148 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3312 | | 3303 | 1792 | 2797 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3312 | | 3303 | 1792 | 2797 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| 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) | 440 | 1187 | 258 | 343 | 1115 | 1116 | 195 | 554 | 179 | 1236 | 522 | 161 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 0 | 24 | 0 | 0 | 77 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 440 | 1431 | 0 | 343 | 1115 | 1092 | 195 | 554 | 102 | 1236 | 522 | 41 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 7% | 0% | 6% | 6% | 0% | 0% | 0% | 8% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.4 | 39.0 | | 16.8 | 44.7 | 75.1 | 14.8 | 14.7 | 31.5 | 30.4 | 30.3 | 30.3 |
| Effective Green, g (s) | 10.4 | 39.0 | | 16.8 | 44.7 | 75.1 | 14.8 | 14.7 | 31.5 | 30.4 | 30.3 | 30.3 |
| Actuated g/C Ratio | 0.09 | 0.32 | | 0.14 | 0.37 | 0.63 | 0.12 | 0.12 | 0.26 | 0.25 | 0.25 | 0.25 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 303 | 1076 | | 462 | 667 | 1750 | 222 | 232 | 392 | 887 | 911 | 400 |
| v/s Ratio Prot | c0.13 | 0.43 | | 0.10 | c0.62 | 0.16 | 0.11 | c0.29 | 0.04 | c0.35 | 0.14 | |
| v/s Ratio Perm | | | | | | 0.23 | | | 0.03 | | | 0.03 |
| v/c Ratio | 1.45 | 1.33 | | 0.74 | 1.67 | 0.62 | 0.88 | 2.39 | 0.26 | 1.39 | 0.57 | 0.10 |
| Uniform Delay, d1 | 54.8 | 40.5 | | 49.5 | 37.6 | 13.8 | 51.7 | 52.6 | 35.0 | 44.8 | 39.2 | 34.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 221.0 | 154.9 | | 5.6 | 308.8 | 0.5 | 29.2 | 637.6 | 0.1 | 184.0 | 2.6 | 0.5 |
| Delay (s) | 275.8 | 195.4 | | 55.1 | 346.5 | 14.3 | 81.0 | 690.3 | 35.1 | 228.8 | 41.8 | 34.9 |
| Level of Service | F | F | | E | F | B | F | F | D | F | D | C |
| Approach Delay (s) | | 214.1 | | | 163.6 | | | 435.9 | | | 161.7 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 210.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.67 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 141.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 908 | 1179 | 869 | 692 | 1588 | 248 | 198 | 478 | 522 | 573 | 462 | 577 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.98 | | 1.00 | 0.92 | | 1.00 | 0.92 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4765 | | 3502 | 3468 | | 1804 | 3299 | | 1804 | 3279 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.10 | 1.00 | | 0.11 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4765 | | 3502 | 3468 | | 183 | 3299 | | 212 | 3279 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 946 | 1228 | 905 | 721 | 1654 | 258 | 206 | 498 | 544 | 597 | 481 | 601 |
| RTOR Reduction (vph) | 0 | 99 | 0 | 0 | 11 | 0 | 0 | 131 | 0 | 0 | 106 | 0 |
| Lane Group Flow (vph) | 946 | 2034 | 0 | 721 | 1901 | 0 | 206 | 911 | 0 | 597 | 976 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1864 | | 319 | 1447 | | 68 | 1233 | | 79 | 1226 | |
| v/s Ratio Prot | c0.52 | 0.43 | | c0.21 | c0.55 | | | 0.28 | | | 0.30 | |
| v/s Ratio Perm | | | | | | | 1.13 | | | c2.82 | | |
| v/c Ratio | 8.09 | 1.25dr | | 2.26 | 1.31 | | 3.03 | 0.74 | | 7.56 | 0.85dr | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 31.1 | | 36.0 | 32.1 | |
| Progression Factor | 0.97 | 0.96 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3190.0 | 42.1 | | 577.0 | 146.2 | | 951.2 | 2.0 | | 2976.7 | 3.4 | |
| Delay (s) | 3242.4 | 75.8 | | 629.3 | 179.7 | | 987.2 | 33.2 | | 3012.7 | 35.5 | |
| Level of Service | F | E | | F | F | | F | C | | F | D | |
| Approach Delay (s) | | 1048.7 | | | 302.8 | | | 190.6 | | | 1094.1 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 706.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.63 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 183.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1741 | 543 | 679 | 1341 | 0 | 0 | 0 | 0 | 747 | 0 | 740 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Hourly flow rate (vph) | 0 | 1852 | 578 | 722 | 1427 | 0 | 0 | 0 | 0 | 795 | 0 | 787 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 1852 | 578 | 722 | 1427 | 1582 |
| Volume Left (vph) | 0 | 0 | 722 | 0 | 795 |
| Volume Right (vph) | 0 | 578 | 0 | 0 | 787 |
| Hadj (s) | 0.07 | -0.58 | 0.50 | 0.00 | -0.11 |
| Departure Headway (s) | 7.2 | 3.2 | 8.1 | 7.6 | 6.9 |
| Degree Utilization, x | 3.68 | 0.51 | 1.62 | 3.01 | 3.02 |
| Capacity (veh/h) | 509 | 1116 | 450 | 478 | 528 |
| Control Delay (s) | 1225.7 | 9.5 | 309.3 | 922.9 | 928.9 |
| Approach Delay (s) | 936.6 | | 716.6 | | 928.9 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 857.9 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 320.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1502 | 892 | 609 | 1839 | 0 | 0 | 0 | 0 | 546 | 0 | 731 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.89 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.99 | 1.00 |
| Satd. Flow (prot) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1453 | 1490 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.99 | 1.00 |
| Satd. Flow (perm) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1453 | 1490 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 1533 | 910 | 621 | 1877 | 0 | 0 | 0 | 0 | 557 | 0 | 746 |
| RTOR Reduction (vph) | 0 | 0 | 301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 1533 | 609 | 621 | 1877 | 0 | 0 | 0 | 0 | 451 | 378 | 362 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 3% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 46.6 | 46.6 | 23.1 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 46.6 | 46.6 | 23.1 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.42 | 0.42 | 0.21 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1499 | 670 | 720 | 2414 | | | | | 377 | 326 | 334 |
| v/s Ratio Prot | | c0.43 | | c0.18 | 0.53 | | | | | c0.27 | 0.26 | 0.24 |
| v/s Ratio Perm | | | 0.38 | | | | | | | | | |
| v/c Ratio | | 1.02 | 0.91 | 0.86 | 0.78 | | | | | 1.20 | 1.16 | 1.08 |
| Uniform Delay, d1 | | 31.7 | 29.7 | 41.9 | 12.2 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 29.2 | 18.4 | 10.1 | 2.5 | | | | | 111.4 | 100.6 | 73.7 |
| Delay (s) | | 60.9 | 48.1 | 52.0 | 14.7 | | | | | 154.1 | 143.3 | 116.3 |
| Level of Service | | E | D | D | B | | | | | F | F | F |
| Approach Delay (s) | | 56.1 | | | 24.0 | | | 0.0 | | | 138.4 | |
| Approach LOS | | E | | | C | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 60.4 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.03 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 183.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 844 | 166 | 242 | 410 | 0 | 0 | 0 | 0 | 497 | 0 | 242 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 879 | 173 | 252 | 427 | 0 | 0 | 0 | 0 | 518 | 0 | 252 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 427 | | | 1052 | | | 1936 | 1810 | 879 | 1810 | 1983 | 427 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 427 | | | 1052 | | | 1936 | 1810 | 879 | 1810 | 1983 | 427 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 61 | | | 100 | 100 | 100 | 0 | 100 | 60 |
| cM capacity (veh/h) | 1143 | | | 654 | | | 21 | 49 | 350 | 43 | 38 | 625 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 879 | 173 | 252 | 427 | 770 |
| Volume Left | 0 | 0 | 252 | 0 | 518 |
| Volume Right | 0 | 173 | 0 | 0 | 252 |
| cSH | 1700 | 1700 | 654 | 1700 | 62 |
| Volume to Capacity | 0.52 | 0.10 | 0.39 | 0.25 | 12.42 |
| Queue Length 95th (ft) | 0 | 0 | 45 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 13.9 | 0.0 | Err |
| Lane LOS | | | B | | F |
| Approach Delay (s) | 0.0 | | 5.2 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3079.0 | | |
| Intersection Capacity Utilization | 117.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 817 | 1671 | 0 | 0 | 1644 | 413 | 376 | 0 | 305 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 834 | 1705 | 0 | 0 | 1678 | 421 | 384 | 0 | 311 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2099 | | | 1705 | | | 5261 | 5471 | 1705 | 5572 | 5261 | 1888 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2099 | | | 1705 | | | 5261 | 5471 | 1705 | 5572 | 5261 | 1888 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 258 | | | 378 | | | 0 | 0 | 114 | 0 | 0 | 89 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 834 | 1705 | 2099 | 695 |
| Volume Left | 834 | 0 | 0 | 384 |
| Volume Right | 0 | 0 | 421 | 311 |
| cSH | 258 | 1700 | 1700 | 0 |
| Volume to Capacity | 3.23 | 1.00 | 1.23 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 1044.0 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 342.8 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 320.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 431 | 1617 | 0 | 0 | 1570 | 880 | 878 | 0 | 886 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (prot) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1514 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (perm) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1514 | 1504 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 440 | 1650 | 0 | 0 | 1602 | 898 | 896 | 0 | 904 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 428 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 440 | 1650 | 0 | 0 | 1602 | 470 | 627 | 539 | 506 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 1% | 2% | 3% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 409 | 3067 | | | 1672 | 505 | 456 | 415 | 412 | | | |
| v/s Ratio Prot | c0.24 | 0.32 | | | c0.31 | | c0.38 | 0.36 | 0.34 | | | |
| v/s Ratio Perm | | | | | | 0.30 | | | | | | |
| v/c Ratio | 1.08 | 0.54 | | | 0.96 | 0.93 | 1.38 | 1.30 | 1.23 | | | |
| Uniform Delay, d1 | 34.8 | 10.5 | | | 29.7 | 29.4 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 66.3 | 0.7 | | | 14.1 | 26.0 | 182.2 | 151.4 | 122.5 | | | |
| Delay (s) | 101.1 | 11.2 | | | 43.8 | 55.3 | 214.8 | 184.0 | 155.2 | | | |
| Level of Service | F | B | | | D | E | F | F | F | | | |
| Approach Delay (s) | | 30.1 | | | 48.0 | | | 185.6 | | | 0.0 | |
| Approach LOS | | C | | | D | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 80.9 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.13 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 183.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 536 | 805 | 0 | 0 | 420 | 20 | 233 | 0 | 238 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 576 | 866 | 0 | 0 | 452 | 22 | 251 | 0 | 256 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 473 | | | 866 | | | 2481 | 2491 | 866 | 2737 | 2481 | 462 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 473 | | | 866 | | | 2481 | 2491 | 866 | 2737 | 2481 | 462 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 47 | | | 100 | | | 0 | 100 | 28 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1089 | | | 786 | | | 12 | 14 | 354 | 2 | 14 | 604 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 576 | 866 | 473 | 506 |
| Volume Left | 576 | 0 | 0 | 251 |
| Volume Right | 0 | 0 | 22 | 256 |
| cSH | 1089 | 1700 | 1700 | 23 |
| Volume to Capacity | 0.53 | 0.51 | 0.28 | 22.26 |
| Queue Length 95th (ft) | 80 | 0 | 0 | Err |
| Control Delay (s) | 12.0 | 0.0 | 0.0 | Err |
| Lane LOS | B | | | F |
| Approach Delay (s) | 4.8 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2094.1 | | |
| Intersection Capacity Utilization | 117.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): OVERFLOW  Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 277 | 146 | 30 | | | 16 | 81 | 107 | | | 72 | 482 | 305 | | | 26 | 575 | 7 | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| Initial Bse: | 277 | 146 | 30 | | | 16 | 81 | 107 | | | 72 | 482 | 305 | | | 26 | 575 | 7 | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | |
| PHF Volume: | 301 | 159 | 33 | | | 17 | 88 | 116 | | | 78 | 524 | 332 | | | 28 | 625 | 8 | | |
| Reduct Vol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| FinalVolume: | 301 | 159 | 33 | | | 17 | 88 | 116 | | | 78 | 524 | 332 | | | 28 | 625 | 8 | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | | | 4.1 | xxxx | xxxxx | | | 7.1 | 6.5 | 6.2 | | | 7.1 | 6.5 | 6.2 | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | | | 2.2 | xxxx | xxxxx | | | 3.5 | 4.0 | 3.3 | | | 3.5 | 4.0 | 3.3 | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 204 | xxxx | xxxxx | | | 191 | xxxx | xxxxx | | | 1216 | 916 | 88 | | | 1370 | 1000 | 159 | | |
| Potent Cap.: | 1379 | xxxx | xxxxx | | | 1394 | xxxx | xxxxx | | | 159 | 274 | 976 | | | 125 | 245 | 892 | | |
| Move Cap.: | 1379 | xxxx | xxxxx | | | 1394 | xxxx | xxxxx | | | 0 | 200 | 976 | | | 0 | 179 | 892 | | |
| Volume/Cap: | 0.22 | xxxx | xxxx | | | 0.01 | xxxx | xxxx | | | xxxx | 2.62 | 0.34 | | | xxxx | 3.50 | 0.01 | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.8 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | |
| Control Del: | 8.3 | xxxx | xxxxx | | | 7.6 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| LOS by Move: | A | * | * | | | A | * | * | | | * | * | * | | | * | * | * | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | | 0 | xxxxx | | xxxx | | 0 | xxxxx | |
| SharedQueue: | 0.8 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| Shrd ConDel: | 8.3 | xxxx | xxxxx | | | 7.6 | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | |
| Shared LOS: | A | * | * | | | A | * | * | | | * | * | * | | | * | * | * | | |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | F | | | | | F | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 5 | 77 | 47 | 5 | 5 | 90 | 94 | 5 | 6 | 401 | 23 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 5 | 5 | 83 | 51 | 5 | 5 | 97 | 101 | 5 | 6 | 431 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 747 | 744 | 431 | 824 | 763 | 101 | 456 | | | 106 | | |
| vC1, stage 1 conf vol | 444 | 444 | | 295 | 295 | | | | | | | |
| vC2, stage 2 conf vol | 303 | 300 | | 530 | 469 | | | | | | | |
| vCu, unblocked vol | 747 | 744 | 431 | 824 | 763 | 101 | 456 | | | 106 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 99 | 99 | 87 | 85 | 99 | 99 | 91 | | | 100 | | |
| cM capacity (veh/h) | 497 | 486 | 628 | 346 | 431 | 960 | 1116 | | | 1497 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 94 | 61 | 97 | 101 | 5 | 6 | 431 | 25 |
| Volume Left | 5 | 51 | 97 | 0 | 0 | 6 | 0 | 0 |
| Volume Right | 83 | 5 | 0 | 0 | 5 | 0 | 0 | 25 |
| cSH | 609 | 373 | 1116 | 1700 | 1700 | 1497 | 1700 | 1700 |
| Volume to Capacity | 0.15 | 0.16 | 0.09 | 0.06 | 0.00 | 0.00 | 0.25 | 0.01 |
| Queue Length 95th (ft) | 13 | 15 | 7 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 12.0 | 16.5 | 8.5 | 0.0 | 0.0 | 7.4 | 0.0 | 0.0 |
| Lane LOS | B | C | A | | | A | | |
| Approach Delay (s) | 12.0 | 16.5 | 4.1 | | | 0.1 | | |
| Approach LOS | B | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.7 | | |
| Intersection Capacity Utilization | 45.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 16 | 5 | 80 | 108 | 5 | 17 | 5 | 156 | 56 | 28 | 430 | 52 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 18 | 5 | 88 | 119 | 5 | 19 | 5 | 171 | 62 | 31 | 473 | 57 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 738 | 778 | 473 | 807 | 774 | 171 | 530 | | | 233 | | |
| vC1, stage 1 conf vol | 534 | 534 | | 182 | 182 | | | | | | | |
| vC2, stage 2 conf vol | 204 | 244 | | 625 | 591 | | | | | | | |
| vCu, unblocked vol | 738 | 778 | 473 | 807 | 774 | 171 | 530 | | | 233 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 96 | 99 | 85 | 68 | 99 | 98 | 99 | | | 98 | | |
| cM capacity (veh/h) | 483 | 472 | 596 | 372 | 455 | 877 | 1048 | | | 1346 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 111 | 142 | 5 | 171 | 62 | 31 | 473 | 57 |
| Volume Left | 18 | 119 | 5 | 0 | 0 | 31 | 0 | 0 |
| Volume Right | 88 | 19 | 0 | 0 | 62 | 0 | 0 | 57 |
| cSH | 567 | 405 | 1048 | 1700 | 1700 | 1346 | 1700 | 1700 |
| Volume to Capacity | 0.20 | 0.35 | 0.01 | 0.10 | 0.04 | 0.02 | 0.28 | 0.03 |
| Queue Length 95th (ft) | 18 | 39 | 0 | 0 | 0 | 2 | 0 | 0 |
| Control Delay (s) | 12.9 | 18.6 | 8.5 | 0.0 | 0.0 | 7.7 | 0.0 | 0.0 |
| Lane LOS | B | C | A | | | A | | |
| Approach Delay (s) | 12.9 | 18.6 | 0.2 | | | 0.4 | | |
| Approach LOS | B | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 43.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 31 | 156 | 23 | 111 | 634 | 69 | 24 | 117 | 141 | 194 | 357 | 81 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 33 | 164 | 24 | 117 | 667 | 73 | 25 | 123 | 148 | 204 | 376 | 85 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1481 | 1149 | 418 | 1181 | 1117 | 197 | 461 | | | 272 | | |
| vC1, stage 1 conf vol | 827 | 827 | | 248 | 248 | | | | | | | |
| vC2, stage 2 conf vol | 654 | 322 | | 933 | 869 | | | | | | | |
| vCu, unblocked vol | 1481 | 1149 | 418 | 1181 | 1117 | 197 | 461 | | | 272 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 44 | 96 | 0 | 0 | 91 | 98 | | | 84 | | |
| cM capacity (veh/h) | 0 | 291 | 639 | 103 | 277 | 849 | 1111 | | | 1303 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 221 | 857 | 297 | 665 |
| Volume Left | 33 | 117 | 25 | 204 |
| Volume Right | 24 | 73 | 148 | 85 |
| cSH | 0 | 236 | 1111 | 1303 |
| Volume to Capacity | Err | 3.63 | 0.02 | 0.16 |
| Queue Length 95th (ft) | Err | Err | 2 | 14 |
| Control Delay (s) | Err | Err | 0.9 | 3.8 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | Err | Err | 0.9 | 3.8 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 117.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.419 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 122.7 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! 0 0 | | | 0 0 1! 0 0 | | | 0 0 1! 0 0 | | | 0 0 1! 0 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 7 | 35 | 15 | 441 | 257 | 5 | 5 | 5 | 756 | 19 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 5 | 7 | 35 | 15 | 441 | 257 | 5 | 5 | 5 | 756 | 19 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 5 | 5 | 7 | 37 | 16 | 472 | 275 | 5 | 5 | 5 | 809 | 20 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 5 | 7 | 37 | 16 | 472 | 275 | 5 | 5 | 5 | 809 | 20 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 5 | 7 | 37 | 16 | 472 | 275 | 5 | 5 | 5 | 809 | 20 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.29 | 0.29 | 0.42 | 0.07 | 0.03 | 0.90 | 0.96 | 0.02 | 0.02 | 0.01 | 0.97 | 0.02 |
| Final Sat.: | 127 | 127 | 178 | 43 | 19 | 547 | 496 | 10 | 10 | 4 | 570 | 14 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.86 | 0.86 | 0.86 | 0.56 | 0.56 | 0.56 | 1.42 | 1.42 | 1.42 |
| Crit Moves: | **** | | | | | **** | | **** | | | | **** |
| Delay/Veh: | 11.0 | 11.0 | 11.0 | 34.5 | 34.5 | 34.5 | 17.6 | 17.6 | 17.6 | 216.5 | 217 | 216.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.0 | 11.0 | 11.0 | 34.5 | 34.5 | 34.5 | 17.6 | 17.6 | 17.6 | 216.5 | 217 | 216.5 |
| LOS by Move: | B | B | B | D | D | D | C | C | C | F | F | F |
| ApproachDel: | 11.0 | | | 34.5 | | | 17.6 | | | 216.5 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 11.0 | | | 34.5 | | | 17.6 | | | 216.5 | | |
| LOS by Appr: | B | | | D | | | C | | | F | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 4.3 | 4.3 | 4.3 | 1.1 | 1.1 | 1.1 | 33.9 | 33.9 | 33.9 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 485 | 557 | 199 | 139 | 680 | 240 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 527 | 605 | 216 | 151 | 739 | 261 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1453 | 870 | 1000 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1453 | 870 | 1000 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 0 | 69 | | | |
| cM capacity (veh/h) | 99 | 354 | 692 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 527 | 605 | 367 | 1000 |
| Volume Left | 527 | 0 | 216 | 0 |
| Volume Right | 0 | 605 | 0 | 261 |
| cSH | 99 | 354 | 692 | 1700 |
| Volume to Capacity | 5.31 | 1.71 | 0.31 | 0.59 |
| Queue Length 95th (ft) | Err | 937 | 33 | 0 |
| Control Delay (s) | Err | 357.6 | 9.2 | 0.0 |
| Lane LOS | F | F | A | |
| Approach Delay (s) | 4845.2 | | 9.2 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2196.4 | | |
| Intersection Capacity Utilization | 105.6% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 471 | 1372 | 814 | 687 | 1468 | 405 | 551 | 349 | 679 | 384 | 470 | 509 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 0.90 | | 1.00 | 0.98 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 4885 | | 3502 | 3216 | | 1805 | 1772 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 4885 | | 3502 | 3216 | | 1805 | 1772 | 1513 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 481 | 1400 | 831 | 701 | 1498 | 413 | 562 | 356 | 693 | 392 | 480 | 519 |
| RTOR Reduction (vph) | 0 | 0 | 372 | 0 | 42 | 0 | 0 | 89 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 481 | 1400 | 459 | 701 | 1870 | 0 | 562 | 960 | 0 | 392 | 537 | 462 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1506 | | 1079 | 991 | | 255 | 251 | 296 |
| v/s Ratio Prot | 0.14 | c0.40 | | c0.39 | 0.38 | | 0.16 | c0.30 | | 0.22 | c0.30 | 0.08 |
| v/s Ratio Perm | | | 0.29 | | | | | | | | | 0.22 |
| v/c Ratio | 2.54 | 1.36 | 0.99 | 5.52 | 1.24 | | 0.52 | 1.19dr | | 1.54 | 2.14 | 1.56 |
| Uniform Delay, d1 | 56.8 | 42.5 | 42.4 | 55.8 | 41.5 | | 34.2 | 40.9 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 0.97 | 1.21 | 1.75 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 707.5 | 165.6 | 35.8 | 2051.0 | 114.4 | | 1.8 | 21.9 | | 260.5 | 525.9 | 268.3 |
| Delay (s) | 762.6 | 217.1 | 110.0 | 2106.8 | 155.9 | | 36.0 | 62.9 | | 312.0 | 577.4 | 316.5 |
| Level of Service | F | F | F | F | F | | D | E | | F | F | F |
| Approach Delay (s) | | 281.0 | | | 679.5 | | | 53.5 | | | 416.0 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 384.6 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 147.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 580 | 929 | 369 | 477 | 1216 | 386 | 309 | 580 | 254 | 335 | 248 | 558 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.97 | 1.00 |
| Satd. Flow (prot) | 3502 | 3331 | | 1805 | 3505 | 1586 | 1805 | 1804 | | | 1846 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.13 | 1.00 |
| Satd. Flow (perm) | 3502 | 3331 | | 1805 | 3505 | 1586 | 308 | 1804 | | | 242 | 1586 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 611 | 978 | 388 | 502 | 1280 | 406 | 325 | 611 | 267 | 353 | 261 | 587 |
| RTOR Reduction (vph) | 0 | 40 | 0 | 0 | 0 | 69 | 0 | 15 | 0 | 0 | 0 | 229 |
| Lane Group Flow (vph) | 611 | 1326 | 0 | 502 | 1280 | 337 | 325 | 863 | 0 | 0 | 614 | 358 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 20.1 | 54.0 | | 10.4 | 44.3 | 44.3 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 20.1 | 54.0 | | 10.4 | 44.3 | 44.3 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.19 | 0.51 | | 0.10 | 0.42 | 0.42 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 670 | 1713 | | 178 | 1478 | 669 | 72 | 424 | | | 56 | 373 |
| v/s Ratio Prot | c0.17 | 0.40 | | c0.28 | c0.37 | | | 0.48 | | | | |
| v/s Ratio Perm | | | | | | 0.21 | 1.06 | | | | c2.54 | 0.23 |
| v/c Ratio | 0.91 | 0.77 | | 2.82 | 0.87 | 0.50 | 4.51 | 2.03 | | | 10.96 | 0.96 |
| Uniform Delay, d1 | 41.6 | 20.6 | | 47.3 | 27.6 | 22.3 | 40.1 | 40.1 | | | 40.1 | 39.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 16.7 | 3.5 | | 834.5 | 7.0 | 2.7 | 1612.7 | 473.8 | | | 4519.0 | 35.4 |
| Delay (s) | 58.3 | 24.1 | | 881.8 | 34.7 | 25.0 | 1652.9 | 514.0 | | | 4559.2 | 75.1 |
| Level of Service | E | C | | F | C | C | F | F | | | F | E |
| Approach Delay (s) | | 34.6 | | | 227.2 | | | 821.7 | | | 2367.5 | |
| Approach LOS | | C | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 669.4 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 3.83 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 159.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 395 | 62 | 34 | 22 | 386 | 253 | 34 | 595 | 37 | 192 | 482 | 420 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 429 | 67 | 37 | 24 | 420 | 275 | 37 | 647 | 40 | 209 | 524 | 457 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 534 | 718 | 724 | 1189 |
| Volume Left (vph) | 429 | 24 | 37 | 209 |
| Volume Right (vph) | 37 | 275 | 40 | 457 |
| Hadj (s) | 0.12 | -0.22 | -0.02 | -0.20 |
| Departure Headway (s) | 9.7 | 9.3 | 9.5 | 9.4 |
| Degree Utilization, x | 1.0 | 1.0 | 1.0 | 1.0 |
| Capacity (veh/h) | 382 | 391 | 383 | 397 |
| Control Delay (s) | 236.6 | 420.6 | 445.0 | 968.8 |
| Approach Delay (s) | 236.6 | 420.6 | 445.0 | 968.8 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 601.1 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 174.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120  Critical Vol./Cap.(X): 1.313
Loss Time (sec): 12  Average Delay (sec/veh): 128.2
Optimal Cycle: OPTIMIZED  Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 56 | 78 | 17 | 207 | 33 | 598 | 272 | 1953 | 66 | 90 | 2243 | 96 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 56 | 78 | 17 | 207 | 33 | 598 | 272 | 1953 | 66 | 90 | 2243 | 96 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 58 | 81 | 18 | 214 | 34 | 618 | 281 | 2020 | 68 | 93 | 2320 | 99 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 58 | 81 | 18 | 214 | 34 | 618 | 281 | 2020 | 68 | 93 | 2320 | 99 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 58 | 81 | 18 | 214 | 34 | 618 | 281 | 2020 | 68 | 93 | 2320 | 99 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.71 | 0.71 | 0.71 | 0.61 | 0.61 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.37 | 0.52 | 0.11 | 0.86 | 0.14 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 499 | 695 | 151 | 996 | 159 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.12 | 0.12 | 0.21 | 0.21 | 0.38 | 0.16 | 0.56 | 0.04 | 0.05 | 0.64 | 0.06 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.12 | 0.52 | 0.52 | 0.08 | 0.49 | 0.49 |
| Volume/Cap: | 0.40 | 0.40 | 0.40 | 0.74 | 0.74 | 1.31 | 1.31 | 1.07 | 0.08 | 0.62 | 1.31 | 0.13 |
| Delay/Veh: | 34.7 | 34.7 | 34.7 | 46.6 | 46.6 | 197.7 | 222.7 | 69.3 | 14.2 | 60.8 | 175 | 16.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.7 | 34.7 | 34.7 | 46.6 | 46.6 | 197.7 | 222.7 | 69.3 | 14.2 | 60.8 | 175 | 16.7 |
| LOS by Move: | C | C | C | D | D | F | F | E | B | E | F | B |
| HCM2kAvgQ: | 5 | 5 | 5 | 10 | 10 | 43 | 21 | 52 | 1 | 4 | 81 | 2 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 115 Critical Vol./Cap.(X): 0.916
Loss Time (sec): 12 Average Delay (sec/veh): 38.4
Optimal Cycle: OPTIMIZED Level Of Service: D

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Split Phase | | | | Split Phase | | | | Permitted | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 33 | 0 | 33 | | 0 | 0 | 0 | | 0 | 32 | 32 | | 10 | 10 | 0 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 1 | 0 | 0 | 0 1 | 0 | 0 | 0 | 0 0 | 0 | 0 | 3 | 0 1 | 1 | 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 458 | 0 | 228 | | 0 | 0 | 0 | | 0 | 1738 | 473 | | 337 | 1856 | 0 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 458 | 0 | 228 | | 0 | 0 | 0 | | 0 | 1738 | 473 | | 337 | 1856 | 0 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | |
| PHF Volume: | 485 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1839 | 501 | | 357 | 1964 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 485 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1839 | 501 | | 357 | 1964 | 0 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 485 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1839 | 501 | | 357 | 1964 | 0 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | |
| Adjustment: | 0.95 | 1.00 | 0.85 | | 1.00 | 1.00 | 1.00 | | 1.00 | 0.91 | 0.85 | | 0.95 | 0.95 | 1.00 | |
| Lanes: | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 3.00 | 1.00 | | 1.00 | 2.00 | 0.00 | |
| Final Sat.: | 1805 | 0 | 1615 | | 0 | 0 | 0 | | 0 | 5187 | 1615 | | 1805 | 3610 | 0 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.27 | 0.00 | 0.15 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.35 | 0.31 | | 0.20 | 0.54 | 0.00 | |
| Crit Moves: | **** | | | | | | | | | **** | | | **** | | | |
| Green/Cycle: | 0.29 | 0.00 | 0.29 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.39 | 0.39 | | 0.22 | 0.60 | 0.00 | |
| Volume/Cap: | 0.92 | 0.00 | 0.51 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.92 | 0.80 | | 0.92 | 0.90 | 0.00 | |
| Delay/Veh: | 60.1 | 0.0 | 34.7 | | 0.0 | 0.0 | 0.0 | | 0.0 | 40.6 | 38.6 | | 70.1 | 25.7 | 0.0 | |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 60.1 | 0.0 | 34.7 | | 0.0 | 0.0 | 0.0 | | 0.0 | 40.6 | 38.6 | | 70.1 | 25.7 | 0.0 | |
| LOS by Move: | E | A | C | | A | A | A | | A | D | D | | E | C | A | |
| HCM2kAvgQ: | 20 | 0 | 7 | | 0 | 0 | 0 | | 0 | 27 | 18 | | 16 | 35 | 0 | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 2.719
Loss Time (sec): 12 Average Delay (sec/veh): 259.7
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 1 | 0 | 1 0 | 0 0 | 1! 0 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 365 | 902 | 329 | 356 | 746 | 205 | 231 | 1608 | 277 | 304 | 1610 | 464 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 365 | 902 | 329 | 356 | 746 | 205 | 231 | 1608 | 277 | 304 | 1610 | 464 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 380 | 940 | 343 | 371 | 777 | 214 | 241 | 1675 | 289 | 317 | 1677 | 483 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 380 | 940 | 343 | 371 | 777 | 214 | 241 | 1675 | 289 | 317 | 1677 | 483 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 380 | 940 | 343 | 371 | 777 | 214 | 241 | 1675 | 289 | 317 | 1677 | 483 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 0.91 | 0.91 | 0.97 | 0.97 | 0.97 | 0.50 | 0.50 | 0.85 | 0.95 | 0.92 | 0.92 |
| Lanes: | 1.00 | 1.47 | 0.53 | 0.27 | 0.57 | 0.16 | 0.25 | 1.75 | 1.00 | 1.00 | 1.55 | 0.45 |
| Final Sat.: | 1730 | 2535 | 925 | 500 | 1048 | 288 | 238 | 1654 | 1615 | 1805 | 2707 | 780 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.22 | 0.37 | 0.37 | 0.74 | 0.74 | 0.74 | 1.01 | 1.01 | 0.18 | 0.18 | 0.62 | 0.62 |
| Crit Moves: | | **** | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.63 | 1.07 | 1.07 | xxxx | xxxx | xxxx | 2.72 | 2.72 | 0.48 | 1.37 | 1.24 | 1.24 |
| Delay/Veh: | 21.9 | 69.9 | 69.9 | 0.0 | 0.0 | 0.0 | 804.2 | 804 | 19.3 | 224.9 | 132 | 132.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 21.9 | 69.9 | 69.9 | 0.0 | 0.0 | 0.0 | 804.2 | 804 | 19.3 | 224.9 | 132 | 132.2 |
| LOS by Move: | C | E | E | A | A | A | F | F | B | F | F | F |
| HCM2kAvgQ: | 9 | 27 | 27 | 29 | 29 | 29 | 103 | 103 | 6 | 20 | 57 | 57 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) Without Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.295
Loss Time (sec): 12 Average Delay (sec/veh): 128.5
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 330 | 24 | 405 | 35 | 27 | 307 | 225 | 1692 | 287 | 274 | 1615 | 315 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 330 | 24 | 405 | 35 | 27 | 307 | 225 | 1692 | 287 | 274 | 1615 | 315 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 355 | 26 | 435 | 38 | 29 | 330 | 242 | 1819 | 309 | 295 | 1737 | 339 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 355 | 26 | 435 | 38 | 29 | 330 | 242 | 1819 | 309 | 295 | 1737 | 339 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 355 | 26 | 435 | 38 | 29 | 330 | 242 | 1819 | 309 | 295 | 1737 | 339 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.38 | 0.86 | 0.86 | 0.27 | 0.86 | 0.86 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.06 | 0.94 | 1.00 | 0.08 | 0.92 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 713 | 91 | 1539 | 504 | 132 | 1505 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.50 | 0.28 | 0.28 | 0.07 | 0.22 | 0.22 | 0.13 | 0.50 | 0.19 | 0.16 | 0.48 | 0.21 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.11 | 0.39 | 0.39 | 0.13 | 0.40 | 0.40 |
| Volume/Cap: | 1.29 | 0.74 | 0.74 | 0.19 | 0.57 | 0.57 | 1.19 | 1.29 | 0.49 | 1.29 | 1.19 | 0.52 |
| Delay/Veh: | 193.9 | 36.2 | 36.2 | 25.0 | 30.3 | 30.3 | 178.5 | 175 | 28.3 | 213.6 | 130 | 27.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 193.9 | 36.2 | 36.2 | 25.0 | 30.3 | 30.3 | 178.5 | 175 | 28.3 | 213.6 | 130 | 27.8 |
| LOS by Move: | F | D | D | C | C | C | F | F | C | F | F | C |
| HCM2kAvgQ: | 25 | 16 | 16 | 1 | 11 | 11 | 17 | 63 | 9 | 21 | 54 | 10 |

Note: Queue reported is the number of cars per lane.

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# APPENDIX 7.2

General Plan Buildout (Post-2035) With Project Conditions
Intersection Operations Analysis Worksheets

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 1.393 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 270.3 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 274 | 437 | 34 | 714 | 389 | 229 | 402 | 1752 | 409 | 82 | 729 | 317 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 274 | 437 | 34 | 714 | 389 | 229 | 402 | 1752 | 409 | 82 | 729 | 317 |
| Added Vol: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 10 | 0 | 8 | 8 | 8 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 274 | 437 | 44 | 724 | 389 | 229 | 402 | 1762 | 409 | 90 | 737 | 325 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 288 | 460 | 46 | 762 | 409 | 241 | 423 | 1855 | 431 | 95 | 776 | 342 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 288 | 460 | 46 | 762 | 409 | 241 | 423 | 1855 | 431 | 95 | 776 | 342 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 288 | 460 | 46 | 762 | 409 | 241 | 423 | 1855 | 431 | 95 | 776 | 342 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.82 | 0.18 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3234 | 326 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.14 | 0.14 | 0.42 | 0.11 | 0.15 | 0.23 | 0.51 | 0.27 | 0.05 | 0.41 | 0.21 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.18 | 0.28 | 0.28 | 0.21 | 0.31 | 0.31 | 0.12 | 0.29 | 0.29 | 0.08 | 0.26 | 0.26 |
| Volume/Cap: | 0.89 | 0.52 | 0.52 | 1.97 | 0.37 | 0.48 | 1.97 | 1.75 | 0.91 | 0.63 | 1.58 | 0.82 |
| Delay/Veh: | 72.5 | 37.3 | 37.3 | 492.9 | 32.5 | 34.4 | 505.7 | 383 | 61.7 | 61.5 | 315 | 54.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 72.5 | 37.3 | 37.3 | 492.9 | 32.5 | 34.4 | 505.7 | 383 | 61.7 | 61.5 | 315 | 54.0 |
| LOS by Move: | E | D | D | F | C | C | F | F | E | E | F | D |
| HCM2kAvgQ: | 14 | 9 | 9 | 74 | 6 | 7 | 42 | 87 | 19 | 4 | 64 | 14 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.082 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 57.0 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Lanes: | 0 | 0 | 1! | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1! | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 11 | 18 | 26 | | 124 | 17 | 134 | | 146 | 393 | 31 | | 13 | 376 | 132 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 11 | 18 | 26 | | 124 | 17 | 134 | | 146 | 393 | 31 | | 13 | 376 | 132 | |
| Added Vol: | 0 | 0 | 0 | | 7 | 0 | 0 | | 0 | 14 | 0 | | 0 | 10 | 5 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 11 | 18 | 26 | | 131 | 17 | 134 | | 146 | 407 | 31 | | 13 | 386 | 137 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | |
| PHF Volume: | 12 | 20 | 28 | | 142 | 18 | 146 | | 159 | 442 | 34 | | 14 | 420 | 149 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 12 | 20 | 28 | | 142 | 18 | 146 | | 159 | 442 | 34 | | 14 | 420 | 149 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 12 | 20 | 28 | | 142 | 18 | 146 | | 159 | 442 | 34 | | 14 | 420 | 149 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Lanes: | 0.20 | 0.33 | 0.47 | | 1.00 | 0.11 | 0.89 | | 0.25 | 0.70 | 0.05 | | 0.02 | 0.72 | 0.26 | |
| Final Sat.: | 89 | 145 | 209 | | 438 | 57 | 450 | | 147 | 409 | 31 | | 15 | 432 | 153 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.13 | | 0.32 | 0.32 | 0.32 | | 1.08 | 1.08 | 1.08 | | 0.97 | 0.97 | 0.97 | |
| Crit Moves: | **** | | | | **** | | | | **** | | | | | **** | | |
| Delay/Veh: | 12.1 | 12.1 | 12.1 | | 14.7 | 13.0 | 13.0 | | 85.0 | 85.0 | 85.0 | | 53.9 | 53.9 | 53.9 | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 12.1 | 12.1 | 12.1 | | 14.7 | 13.0 | 13.0 | | 85.0 | 85.0 | 85.0 | | 53.9 | 53.9 | 53.9 | |
| LOS by Move: | B | B | B | | B | B | B | | F | F | F | | F | F | F | |
| ApproachDel: | 12.1 | | | | 13.8 | | | | 85.0 | | | | 53.9 | | | |
| Delay Adj: | 1.00 | | | | 1.00 | | | | 1.00 | | | | 1.00 | | | |
| ApprAdjDel: | 12.1 | | | | 13.8 | | | | 85.0 | | | | 53.9 | | | |
| LOS by Appr: | B | | | | B | | | | F | | | | F | | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.1 | | 0.5 | 0.5 | 0.5 | | 12.4 | 12.4 | 12.4 | | 7.5 | 7.5 | 7.5 | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 461 | 1275 | 113 | 588 | 1242 | 622 | 144 | 748 | 715 | 708 | 730 | 662 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.95 | | 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) | 1805 | 5117 | | 3072 | 3411 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5117 | | 3072 | 3411 | | 1805 | 3610 | 1419 | 1805 | 3610 | 1589 |
| 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) | 501 | 1386 | 123 | 639 | 1350 | 676 | 157 | 813 | 777 | 770 | 793 | 720 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| Lane Group Flow (vph) | 501 | 1500 | 0 | 639 | 1972 | 0 | 157 | 813 | 777 | 770 | 793 | 640 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 14% | 0% | 0% | 0% | 0% | 12% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 5.0 | 43.0 | 43.0 | 5.0 | 43.0 | 43.0 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 5.0 | 43.0 | 43.0 | 5.0 | 43.0 | 43.0 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.04 | 0.37 | 0.37 | 0.04 | 0.37 | 0.37 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1802 | | 146 | 1207 | | 78 | 1349 | 530 | 78 | 1349 | 594 |
| v/s Ratio Prot | c0.28 | 0.29 | | 0.21 | c0.58 | | c0.09 | 0.23 | | c0.43 | 0.22 | |
| v/s Ratio Perm | | | | | | | | | c0.55 | | | 0.40 |
| v/c Ratio | 6.04 | 0.83 | | 4.38 | 1.63 | | 2.01 | 0.60 | 1.47 | 9.87 | 0.59 | 1.08 |
| Uniform Delay, d1 | 54.9 | 34.1 | | 54.8 | 37.1 | | 55.0 | 29.1 | 36.0 | 55.0 | 28.9 | 36.0 |
| Progression Factor | 1.00 | 1.00 | | 0.95 | 0.79 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2292.0 | 4.7 | | 1521.0 | 285.5 | | 497.8 | 0.5 | 219.9 | 4017.8 | 0.4 | 59.5 |
| Delay (s) | 2346.8 | 38.8 | | 1573.1 | 315.0 | | 552.8 | 29.6 | 255.9 | 4072.8 | 29.3 | 95.5 |
| Level of Service | F | D | | F | F | | F | C | F | F | C | F |
| Approach Delay (s) | | 614.1 | | | 616.6 | | | 177.3 | | | 1413.9 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 737.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.25 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 159.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 35 | 94 | 5 | 9 | 103 | 2040 | 143 | 58 | 1341 | 135 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 5 | 5 | 35 | 94 | 5 | 9 | 103 | 2040 | 143 | 58 | 1341 | 135 | | | | | | | | | | | | |
| Added Vol: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 34 | 0 | 8 | 26 | 8 | | | | | | | | | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Initial Fut: | 5 | 5 | 45 | 104 | 5 | 9 | 103 | 2074 | 143 | 66 | 1367 | 143 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | | | | | |
| PHF Volume: | 5 | 5 | 47 | 108 | 5 | 9 | 107 | 2154 | 148 | 69 | 1420 | 148 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| FinalVolume: | 5 | 5 | 47 | 108 | 5 | 9 | 107 | 2154 | 148 | 69 | 1420 | 148 | | | | | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 4080 | 4147 | 2228 | 4099 | 4147 | 1494 | 1568 | xxxx | xxxxx | 2302 | xxxx | xxxxx | | | | | | | | | | | | |
| Potent Cap.: | 1 | 2 | 55 | 1 | 2 | 153 | 426 | xxxx | xxxxx | 222 | xxxx | xxxxx | | | | | | | | | | | | |
| Move Cap.: | 0 | 1 | 55 | 0 | 1 | 153 | 426 | xxxx | xxxxx | 222 | xxxx | xxxxx | | | | | | | | | | | | |
| Volume/Cap: | xxxx | 4.45 | 0.85 | xxxx | 4.45 | 0.06 | 0.25 | xxxx | xxxx | 0.31 | xxxx | xxxx | | | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 3.7 | xxxx | xxxx | 0.2 | 1.0 | xxxx | xxxxx | 1.3 | xxxx | xxxxx | | | | | | | | | | | | |
| Control Del: | xxxxx | xxxx | 197.1 | xxxxx | xxxx | 30.1 | 16.2 | xxxx | xxxxx | 28.4 | xxxx | xxxxx | | | | | | | | | | | | |
| LOS by Move: | * | * | F | * | * | D | C | * | * | D | * | * | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 0 | xxxx | xxxxx | 0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | | | | | | |
| ApproachDel: | +Inf | | | +Inf | | | xxxxxx | | | xxxxxx | | | | | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 2.705
Loss Time (sec): 12 Average Delay (sec/veh): 483.0
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 936 | 389 | 299 | 224 | 234 | 296 | 414 | 614 | 1066 | 263 | 456 | 182 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 936 | 389 | 299 | 224 | 234 | 296 | 414 | 614 | 1066 | 263 | 456 | 182 |
| Added Vol: | 41 | 8 | 0 | 0 | 10 | 0 | 0 | 0 | 54 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 977 | 397 | 299 | 224 | 244 | 296 | 414 | 614 | 1120 | 263 | 456 | 182 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 996 | 405 | 305 | 228 | 249 | 302 | 422 | 626 | 1142 | 268 | 465 | 186 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 996 | 405 | 305 | 228 | 249 | 302 | 422 | 626 | 1142 | 268 | 465 | 186 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 996 | 405 | 305 | 228 | 249 | 302 | 422 | 626 | 1142 | 268 | 465 | 186 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 1.00 | 0.85 | 0.51 | 0.51 | 0.85 | 0.29 | 0.29 | 0.29 |
| Lanes: | 1.00 | 0.57 | 0.43 | 1.00 | 1.00 | 1.00 | 0.40 | 0.60 | 1.00 | 0.29 | 0.51 | 0.20 |
| Final Sat.: | 1805 | 1014 | 764 | 1805 | 1900 | 1615 | 391 | 580 | 1615 | 158 | 274 | 109 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.55 | 0.40 | 0.40 | 0.13 | 0.13 | 0.19 | 1.08 | 1.08 | 0.71 | 1.70 | 1.70 | 1.70 |
| Crit Moves: | **** | | | | | **** | | | | | **** | |
| Green/Cycle: | 0.20 | 0.20 | 0.20 | 0.08 | 0.08 | 0.08 | 0.62 | 0.62 | 0.82 | 0.62 | 0.62 | 0.62 |
| Volume/Cap: | 2.75 | 1.99 | 1.99 | 1.52 | 1.57 | 2.24 | 1.75 | 1.75 | 0.87 | 2.75 | 2.75 | 2.75 |
| Delay/Veh: | 844.0 | 503 | 503.3 | 319.1 | 340 | 637.1 | 368.2 | 368 | 13.1 | 819.7 | 820 | 819.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 844.0 | 503 | 503.3 | 319.1 | 340 | 637.1 | 368.2 | 368 | 13.1 | 819.7 | 820 | 819.7 |
| LOS by Move: | F | F | F | F | F | F | F | F | B | F | F | F |
| HCM2kAvgQ: | 114 | 70 | 70 | 20 | 22 | 33 | 93 | 93 | 29 | 105 | 105 | 105 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 163 | 573 | 58 | 623 | 653 | 1094 | 153 | 295 | 541 | 955 | 222 | 161 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3128 | | 3242 | 1759 | 2796 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3128 | | 3242 | 1759 | 2796 | 1805 | 1900 | 1404 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 173 | 610 | 62 | 663 | 695 | 1164 | 163 | 314 | 576 | 1016 | 236 | 171 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 0 | 33 | 0 | 0 | 70 | 0 | 0 | 126 |
| Lane Group Flow (vph) | 173 | 665 | 0 | 663 | 695 | 1131 | 163 | 314 | 506 | 1016 | 236 | 45 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 15% | 0% | 8% | 8% | 0% | 0% | 0% | 15% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 9.5 | 30.4 | | 25.4 | 45.6 | 76.0 | 13.8 | 14.7 | 40.1 | 30.4 | 31.3 | 31.3 |
| Effective Green, g (s) | 9.5 | 30.4 | | 25.4 | 45.6 | 76.0 | 13.8 | 14.7 | 40.1 | 30.4 | 31.3 | 31.3 |
| Actuated g/C Ratio | 0.08 | 0.25 | | 0.21 | 0.38 | 0.63 | 0.12 | 0.12 | 0.33 | 0.25 | 0.26 | 0.26 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 277 | 792 | | 686 | 668 | 1770 | 207 | 232 | 469 | 887 | 941 | 413 |
| v/s Ratio Prot | 0.05 | 0.21 | | 0.20 | c0.40 | 0.16 | 0.09 | c0.17 | c0.23 | c0.29 | 0.07 | |
| v/s Ratio Perm | | | | | | 0.24 | | | 0.13 | | | 0.03 |
| v/c Ratio | 0.62 | 0.84 | | 0.97 | 1.04 | 0.64 | 0.79 | 1.35 | 1.08 | 1.15 | 0.25 | 0.11 |
| Uniform Delay, d1 | 53.5 | 42.5 | | 46.9 | 37.2 | 13.6 | 51.7 | 52.6 | 40.0 | 44.8 | 35.1 | 33.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.1 | 7.5 | | 25.9 | 45.8 | 0.6 | 16.5 | 184.6 | 64.5 | 78.7 | 0.6 | 0.5 |
| Delay (s) | 56.7 | 50.0 | | 72.7 | 83.0 | 14.1 | 68.2 | 237.3 | 104.4 | 123.5 | 35.7 | 34.3 |
| Level of Service | E | D | | E | F | B | E | F | F | F | D | C |
| Approach Delay (s) | | 51.4 | | | 48.5 | | | 138.4 | | | 98.2 | |
| Approach LOS | | D | | | D | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 77.2 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.15 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 98.4% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 750 | 940 | 1007 | 382 | 1494 | 706 | 464 | 519 | 664 | 398 | 570 | 493 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.92 | | 1.00 | 0.95 | | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4564 | | 3502 | 3240 | | 1804 | 3275 | | 1805 | 3333 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.09 | 1.00 | | 0.09 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4564 | | 3502 | 3240 | | 177 | 3275 | | 177 | 3333 | |
| 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) | 815 | 1022 | 1095 | 415 | 1624 | 767 | 504 | 564 | 722 | 433 | 620 | 536 |
| RTOR Reduction (vph) | 0 | 60 | 0 | 0 | 49 | 0 | 0 | 140 | 0 | 0 | 106 | 0 |
| Lane Group Flow (vph) | 815 | 2057 | 0 | 415 | 2342 | 0 | 504 | 1146 | 0 | 433 | 1050 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 8% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1785 | | 319 | 1352 | | 66 | 1224 | | 66 | 1246 | |
| v/s Ratio Prot | c0.45 | 0.45 | | 0.12 | c0.72 | | | 0.35 | | | 0.32 | |
| v/s Ratio Perm | | | | | | | c2.85 | | | 2.45 | | |
| v/c Ratio | 6.97 | 1.60dr | | 1.30 | 1.73 | | 7.64 | 0.98dr | | 6.56 | 0.84 | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 34.7 | | 36.0 | 32.9 | |
| Progression Factor | 0.99 | 1.05 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2686.2 | 69.3 | | 156.5 | 332.7 | | 3017.4 | 13.0 | | 2534.0 | 5.1 | |
| Delay (s) | 2739.5 | 106.3 | | 208.8 | 366.2 | | 3053.4 | 47.6 | | 2570.0 | 38.1 | |
| Level of Service | F | F | | F | F | | F | D | | F | D | |
| Approach Delay (s) | | 838.2 | | | 342.9 | | | 894.0 | | | 728.0 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 677.5 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.70 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 182.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1604 | 466 | 625 | 1139 | 0 | 0 | 0 | 0 | 466 | 0 | 748 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 1743 | 507 | 679 | 1238 | 0 | 0 | 0 | 0 | 507 | 0 | 813 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 1743 | 507 | 679 | 1238 | 1320 |
| Volume Left (vph) | 0 | 0 | 679 | 0 | 507 |
| Volume Right (vph) | 0 | 507 | 0 | 0 | 813 |
| Hadj (s) | 0.05 | -0.48 | 0.62 | 0.07 | -0.23 |
| Departure Headway (s) | 7.1 | 3.2 | 8.2 | 7.7 | 6.8 |
| Degree Utilization, x | 1.0 | 0.45 | 1.0 | 1.0 | 1.0 |
| Capacity (veh/h) | 509 | 1115 | 443 | 483 | 545 |
| Control Delay (s) | 1125.1 | 8.8 | 277.7 | 755.6 | 685.5 |
| Approach Delay (s) | 873.8 | | 586.3 | | 685.5 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 728.0 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 229.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1321 | 747 | 841 | 2035 | 0 | 0 | 0 | 0 | 784 | 0 | 745 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.92 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1411 | 1434 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | | 3406 | 1553 | 3367 | 3505 | | | | | 1531 | 1411 | 1434 |
| 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) | 0 | 1436 | 812 | 914 | 2212 | 0 | 0 | 0 | 0 | 852 | 0 | 810 |
| RTOR Reduction (vph) | 0 | 0 | 305 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 1436 | 507 | 914 | 2212 | 0 | 0 | 0 | 0 | 579 | 501 | 470 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 4% | 4% | 3% | 0% | 0% | 0% | 0% | 12% | 0% | 7% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.40 | 0.40 | 0.23 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1371 | 625 | 777 | 2367 | | | | | 343 | 316 | 321 |
| v/s Ratio Prot | | c0.42 | | c0.27 | 0.63 | | | | | c0.38 | 0.36 | 0.33 |
| v/s Ratio Perm | | | 0.33 | | | | | | | | | |
| v/c Ratio | | 1.05 | 0.81 | 1.18 | 0.93 | | | | | 1.69 | 1.59 | 1.46 |
| Uniform Delay, d1 | | 32.9 | 29.1 | 42.3 | 15.7 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 37.7 | 10.9 | 92.6 | 8.4 | | | | | 322.0 | 278.3 | 225.5 |
| Delay (s) | | 70.6 | 40.1 | 134.9 | 24.1 | | | | | 364.7 | 320.9 | 268.2 |
| Level of Service | | E | D | F | C | | | | | F | F | F |
| Approach Delay (s) | | 59.6 | | | 56.5 | | | 0.0 | | | 319.5 | |
| Approach LOS | | E | | | E | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 119.6 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.25 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 166.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 836 | 365 | 277 | 928 | 0 | 0 | 0 | 0 | 350 | 0 | 586 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 909 | 397 | 301 | 1009 | 0 | 0 | 0 | 0 | 380 | 0 | 637 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1009 | | | 1305 | | | 2838 | 2520 | 909 | 2520 | 2916 | 1009 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1009 | | | 1305 | | | 2838 | 2520 | 909 | 2520 | 2916 | 1009 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 41 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 695 | | | 511 | | | 0 | 12 | 336 | 7 | 6 | 294 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 909 | 397 | 301 | 1009 | 1017 |
| Volume Left | 0 | 0 | 301 | 0 | 380 |
| Volume Right | 0 | 397 | 0 | 0 | 637 |
| cSH | 1700 | 1700 | 511 | 1700 | 18 |
| Volume to Capacity | 0.53 | 0.23 | 0.59 | 0.59 | 56.55 |
| Queue Length 95th (ft) | 0 | 0 | 94 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 21.7 | 0.0 | Err |
| Lane LOS | | | C | | F |
| Approach Delay (s) | 0.0 | | 5.0 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2802.2 | | |
| Intersection Capacity Utilization | 178.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 607 | 1463 | 0 | 0 | 1471 | 554 | 293 | 0 | 950 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 660 | 1590 | 0 | 0 | 1599 | 602 | 318 | 0 | 1033 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2201 | | | 1590 | | | 4810 | 5111 | 1590 | 5842 | 4810 | 1900 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2201 | | | 1590 | | | 4810 | 5111 | 1590 | 5842 | 4810 | 1900 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 228 | | | 418 | | | 0 | 0 | 134 | 0 | 0 | 87 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 660 | 1590 | 2201 | 1351 |
| Volume Left | 660 | 0 | 0 | 318 |
| Volume Right | 0 | 0 | 602 | 1033 |
| cSH | 228 | 1700 | 1700 | 0 |
| Volume to Capacity | 2.90 | 0.94 | 1.29 | Err |
| Queue Length 95th (ft) | 1457 | 0 | 0 | Err |
| Control Delay (s) | 898.6 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 263.5 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 229.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 326 | 1779 | 0 | 0 | 1920 | 716 | 958 | 0 | 938 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.92 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (prot) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1523 | 1490 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (perm) | 1597 | 4848 | | | 4988 | 1481 | 1698 | 1523 | 1490 | | | |
| 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) | 354 | 1934 | 0 | 0 | 2087 | 778 | 1041 | 0 | 1020 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 445 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 354 | 1934 | 0 | 0 | 2087 | 333 | 718 | 626 | 589 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 13% | 7% | 0% | 0% | 4% | 7% | 1% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 361 | 2924 | | | 1623 | 482 | 466 | 417 | 408 | | | |
| v/s Ratio Prot | c0.22 | 0.40 | | | c0.42 | | c0.42 | 0.41 | 0.40 | | | |
| v/s Ratio Perm | | | | | | 0.22 | | | | | | |
| v/c Ratio | 0.98 | 0.66 | | | 1.29 | 0.69 | 1.54 | 1.50 | 1.44 | | | |
| Uniform Delay, d1 | 34.6 | 11.8 | | | 30.4 | 26.4 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 41.9 | 1.2 | | | 133.5 | 7.9 | 253.9 | 238.0 | 213.2 | | | |
| Delay (s) | 76.5 | 13.0 | | | 163.8 | 34.3 | 286.5 | 270.6 | 245.9 | | | |
| Level of Service | E | B | | | F | C | F | F | F | | | |
| Approach Delay (s) | | 22.8 | | | 128.6 | | | 268.3 | | | 0.0 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 135.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.29 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 166.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 740 | 446 | 0 | 0 | 789 | 141 | 416 | 0 | 501 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 804 | 485 | 0 | 0 | 858 | 153 | 452 | 0 | 545 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1011 | | | 485 | | | 3028 | 3104 | 485 | 3572 | 3028 | 934 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1011 | | | 485 | | | 3028 | 3104 | 485 | 3572 | 3028 | 934 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 7 | 0 | 0 | 100 |
| cM capacity (veh/h) | 674 | | | 1089 | | | 0 | 0 | 586 | 0 | 0 | 325 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 804 | 485 | 1011 | 997 |
| Volume Left | 804 | 0 | 0 | 452 |
| Volume Right | 0 | 0 | 153 | 545 |
| cSH | 674 | 1700 | 1700 | 0 |
| Volume to Capacity | 1.19 | 0.29 | 0.59 | Err |
| Queue Length 95th (ft) | 683 | 0 | 0 | Err |
| Control Delay (s) | 122.8 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 76.6 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 178.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 144 | 97 | | 27 | | 13 | 185 | | 55 | | 112 | 344 | | 120 | | 46 | 355 | | 28 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Initial Bse: | 144 | 97 | | 27 | | 13 | 185 | | 55 | | 112 | 344 | | 120 | | 46 | 355 | | 28 | |
| Added Vol: | 0 | 5 | | 8 | | 0 | 7 | | 0 | | 0 | 0 | | 0 | | 10 | 0 | | 0 | |
| PasserByVol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | |
| Initial Fut: | 144 | 102 | | 35 | | 13 | 192 | | 55 | | 112 | 344 | | 120 | | 56 | 355 | | 28 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | |
| PHF Volume: | 157 | 111 | | 38 | | 14 | 209 | | 60 | | 122 | 374 | | 130 | | 61 | 386 | | 30 | |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | |
| FinalVolume: | 157 | 111 | | 38 | | 14 | 209 | | 60 | | 122 | 374 | | 130 | | 61 | 386 | | 30 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | | | 4.1 | xxxx | xxxxx | | | 7.1 | 6.5 | | 6.2 | | 7.1 | 6.5 | | 6.2 | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | | | 2.2 | xxxx | xxxxx | | | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 268 | xxxx | xxxxx | | | 149 | xxxx | xxxxx | | | 888 | 699 | | 209 | | 943 | 721 | | 111 | |
| Potent Cap.: | 1307 | xxxx | xxxxx | | | 1445 | xxxx | xxxxx | | | 266 | 366 | | 837 | | 245 | 356 | | 948 | |
| Move Cap.: | 1307 | xxxx | xxxxx | | | 1445 | xxxx | xxxxx | | | 0 | 315 | | 837 | | 0 | 306 | | 948 | |
| Volume/Cap: | 0.12 | xxxx | xxxx | | | 0.01 | xxxx | xxxx | | | xxxx | 1.19 | | 0.16 | | xxxx | 1.26 | | 0.03 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.4 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | |
| Control Del: | 8.1 | xxxx | xxxxx | | | 7.5 | xxxx | xxxxx | | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | |
| LOS by Move: | A | * | | * | | A | * | | * | | * | * | | * | | * | * | | * | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | xxxx | | 0 | xxxxx | | xxxx | | 0 | xxxxx | |
| SharedQueue: | 0.4 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | | | 7.5 | xxxx | xxxxx | | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | |
| Shared LOS: | A | * | | * | | A | * | | * | | * | * | | * | | * | * | | * | |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | F | | | | | F | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 13 | 0 | 0 | 12 | 0 | 284 | 19 | 0 | 471 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 0 | 0 | 15 | 0 | 0 | 14 | 0 | 338 | 23 | 0 | 561 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 913 | 921 | 561 | 914 | 911 | 338 | 573 | | | 361 | | |
| vC1, stage 1 conf vol | 561 | 561 | | 338 | 338 | | | | | | | |
| vC2, stage 2 conf vol | 352 | 361 | | 576 | 573 | | | | | | | |
| vCu, unblocked vol | 913 | 921 | 561 | 914 | 911 | 338 | 573 | | | 361 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 97 | 100 | 100 | 98 | 100 | | | 100 | | |
| cM capacity (veh/h) | 450 | 451 | 531 | 440 | 451 | 709 | 1010 | | | 1209 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 15 | 14 | 338 | 23 | 561 | 12 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 15 | 14 | 0 | 23 | 0 | 12 |
| cSH | 531 | 709 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.03 | 0.02 | 0.20 | 0.01 | 0.33 | 0.01 |
| Queue Length 95th (ft) | 2 | 2 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 12.0 | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | B | | | | |
| Approach Delay (s) | 12.0 | 10.2 | 0.0 | | 0.0 | |
| Approach LOS | B | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 34.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 10 | 5 | 7 | 71 | 5 | 10 | 10 | 283 | 17 | 97 | 382 | 5 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 14 | 7 | 9 | 96 | 7 | 14 | 14 | 382 | 23 | 131 | 516 | 7 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1205 | 1211 | 516 | 1201 | 1195 | 382 | 523 | | | 405 | | |
| vC1, stage 1 conf vol | 778 | 778 | | 409 | 409 | | | | | | | |
| vC2, stage 2 conf vol | 426 | 432 | | 791 | 785 | | | | | | | |
| vCu, unblocked vol | 1205 | 1211 | 516 | 1201 | 1195 | 382 | 523 | | | 405 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 95 | 98 | 98 | 67 | 98 | 98 | 99 | | | 89 | | |
| cM capacity (veh/h) | 297 | 310 | 563 | 294 | 319 | 669 | 1054 | | | 1164 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 30 | 116 | 14 | 382 | 23 | 131 | 516 | 7 |
| Volume Left | 14 | 96 | 14 | 0 | 0 | 131 | 0 | 0 |
| Volume Right | 9 | 14 | 0 | 0 | 23 | 0 | 0 | 7 |
| cSH | 354 | 316 | 1054 | 1700 | 1700 | 1164 | 1700 | 1700 |
| Volume to Capacity | 0.08 | 0.37 | 0.01 | 0.22 | 0.01 | 0.11 | 0.30 | 0.00 |
| Queue Length 95th (ft) | 7 | 41 | 1 | 0 | 0 | 9 | 0 | 0 |
| Control Delay (s) | 16.1 | 22.9 | 8.5 | 0.0 | 0.0 | 8.5 | 0.0 | 0.0 |
| Lane LOS | C | C | A | | | A | | |
| Approach Delay (s) | 16.1 | 22.9 | 0.3 | | | 1.7 | | |
| Approach LOS | C | C | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.6 | | |
| Intersection Capacity Utilization | 41.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 61 | 356 | 32 | 92 | 116 | 97 | 30 | 150 | 85 | 120 | 303 | 38 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 66 | 387 | 35 | 100 | 126 | 105 | 33 | 163 | 92 | 130 | 329 | 41 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1054 | 932 | 350 | 1114 | 906 | 209 | 371 | | | 255 | | |
| vC1, stage 1 conf vol | 611 | 611 | | 274 | 274 | | | | | | | |
| vC2, stage 2 conf vol | 443 | 321 | | 839 | 632 | | | | | | | |
| vCu, unblocked vol | 1054 | 932 | 350 | 1114 | 906 | 209 | 371 | | | 255 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 74 | 0 | 95 | 0 | 66 | 87 | 97 | | | 90 | | |
| cM capacity (veh/h) | 252 | 381 | 698 | 4 | 375 | 836 | 1199 | | | 1321 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 488 | 332 | 288 | 501 |
| Volume Left | 66 | 100 | 33 | 130 |
| Volume Right | 35 | 105 | 92 | 41 |
| cSH | 367 | 14 | 1199 | 1321 |
| Volume to Capacity | 1.33 | 23.23 | 0.03 | 0.10 |
| Queue Length 95th (ft) | 577 | Err | 2 | 8 |
| Control Delay (s) | 195.6 | Err | 1.1 | 2.8 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | 195.6 | Err | 1.1 | 2.8 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2121.0 | | |
| Intersection Capacity Utilization | 82.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 0.795 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 25.4 |
| Optimal Cycle: | 0 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 5 | 140 | 5 | 262 | 192 | 150 | 5 | 5 | 378 | 41 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 5 | 5 | 140 | 5 | 262 | 192 | 150 | 5 | 5 | 378 | 41 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 21 | 27 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 5 | 5 | 140 | 5 | 283 | 219 | 150 | 5 | 5 | 378 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 5 | 5 | 5 | 152 | 5 | 308 | 238 | 163 | 5 | 5 | 411 | 45 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 5 | 5 | 152 | 5 | 308 | 238 | 163 | 5 | 5 | 411 | 45 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 5 | 5 | 152 | 5 | 308 | 238 | 163 | 5 | 5 | 411 | 45 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.34 | 0.33 | 0.33 | 0.33 | 0.01 | 0.66 | 0.59 | 0.40 | 0.01 | 0.01 | 0.89 | 0.10 |
| Final Sat.: | 134 | 134 | 134 | 192 | 7 | 388 | 325 | 222 | 7 | 7 | 517 | 56 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.79 | 0.79 | 0.79 | 0.73 | 0.73 | 0.73 | 0.79 | 0.79 | 0.79 |
| Crit Moves: | **** | | | **** | | | | **** | | | **** | |
| Delay/Veh: | 10.7 | 10.7 | 10.7 | 26.2 | 26.2 | 26.2 | 23.3 | 23.3 | 23.3 | 27.0 | 27.0 | 27.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.7 | 10.7 | 10.7 | 26.2 | 26.2 | 26.2 | 23.3 | 23.3 | 23.3 | 27.0 | 27.0 | 27.0 |
| LOS by Move: | B | B | B | D | D | D | C | C | C | D | D | D |
| ApproachDel: | 10.7 | | | 26.2 | | | 23.3 | | | 27.0 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 10.7 | | | 26.2 | | | 23.3 | | | 27.0 | | |
| LOS by Appr: | B | | | D | | | C | | | D | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 2.8 | 2.8 | 2.8 | 2.2 | 2.2 | 2.2 | 2.9 | 2.9 | 2.9 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 380 | 567 | 647 | 192 | 167 | 283 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 413 | 616 | 703 | 209 | 182 | 308 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1951 | 335 | 489 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1951 | 335 | 489 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 13 | 35 | | | |
| cM capacity (veh/h) | 25 | 711 | 1085 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 413 | 616 | 912 | 489 |
| Volume Left | 413 | 0 | 703 | 0 |
| Volume Right | 0 | 616 | 0 | 308 |
| cSH | 25 | 711 | 1085 | 1700 |
| Volume to Capacity | 16.52 | 0.87 | 0.65 | 0.29 |
| Queue Length 95th (ft) | Err | 260 | 125 | 0 |
| Control Delay (s) | Err | 33.7 | 13.4 | 0.0 |
| Lane LOS | F | D | B | |
| Approach Delay (s) | 4032.4 | | 13.4 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1712.8 | | |
| Intersection Capacity Utilization | 103.1% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 255 | 1257 | 491 | 914 | 1684 | 515 | 320 | 175 | 426 | 555 | 249 | 578 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 0.89 | | 1.00 | 0.94 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3406 | 1587 | 1805 | 4946 | | 3502 | 3188 | | 1805 | 1674 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3406 | 1587 | 1805 | 4946 | | 3502 | 3188 | | 1805 | 1674 | 1513 |
| 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 | 1366 | 534 | 993 | 1830 | 560 | 348 | 190 | 463 | 603 | 271 | 628 |
| RTOR Reduction (vph) | 0 | 0 | 245 | 0 | 46 | 0 | 0 | 85 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 277 | 1366 | 289 | 993 | 2344 | 0 | 348 | 568 | 0 | 603 | 472 | 427 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 6% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 993 | 462 | 127 | 1525 | | 1079 | 982 | | 255 | 237 | 296 |
| v/s Ratio Prot | 0.08 | 0.40 | | c0.55 | c0.47 | | 0.10 | c0.18 | | c0.33 | 0.28 | 0.08 |
| v/s Ratio Perm | | | 0.18 | | | | | | | | | 0.20 |
| v/c Ratio | 1.47 | 1.38 | 0.63 | 7.82 | 1.54 | | 0.32 | 0.58 | | 2.36 | 1.99 | 1.44 |
| Uniform Delay, d1 | 56.8 | 42.5 | 36.8 | 55.8 | 41.5 | | 31.9 | 34.9 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 236.1 | 175.4 | 6.3 | 3084.7 | 245.1 | | 0.8 | 2.5 | | 626.1 | 461.0 | 217.3 |
| Delay (s) | 292.9 | 217.9 | 43.1 | 3140.4 | 286.6 | | 32.7 | 37.4 | | 677.6 | 512.5 | 265.6 |
| Level of Service | F | F | D | F | F | | C | D | | F | F | F |
| Approach Delay (s) | | 184.6 | | | 1124.3 | | | 35.8 | | | 508.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 620.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.89 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 165.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 2366 | 168 | 0 | 2303 | 0 | 105 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2572 | 183 | 0 | 2503 | 0 | 114 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.63 | | 0.63 | 0.63 |
| vC, conflicting volume | | | 2754 | | 3198 | 857 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 1746 | | 2445 | 0 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 83 |
| cM capacity (veh/h) | | | 231 | | 17 | 691 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | EB 4 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|---|---|
| Volume Total | 857 | 857 | 857 | 183 | 626 | 626 | 626 | 626 | 114 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 183 | 0 | 0 | 0 | 0 | 114 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 691 |
| Volume to Capacity | 0.50 | 0.50 | 0.50 | 0.11 | 0.37 | 0.37 | 0.37 | 0.37 | 0.17 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.2 |
| Lane LOS | | | | | | | | | B |
| Approach Delay (s) | 0.0 | | | | 0.0 | | | | 11.2 |
| Approach LOS | | | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.2 | | |
| Intersection Capacity Utilization | 58.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 616 | 1431 | 324 | 359 | 1398 | 396 | 494 | 395 | 367 | 442 | 327 | 399 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.93 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.97 | 1.00 |
| Satd. Flow (prot) | 3502 | 3259 | | 1805 | 3374 | 1586 | 1805 | 1748 | | | 1846 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.13 | 1.00 |
| Satd. Flow (perm) | 3502 | 3259 | | 1805 | 3374 | 1586 | 308 | 1748 | | | 242 | 1586 |
| 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) | 670 | 1555 | 352 | 390 | 1520 | 430 | 537 | 429 | 399 | 480 | 355 | 434 |
| RTOR Reduction (vph) | 0 | 18 | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 | 164 |
| Lane Group Flow (vph) | 670 | 1889 | 0 | 390 | 1520 | 361 | 537 | 796 | 0 | 0 | 835 | 270 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 9% | 0% | 0% | 7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.19 | 0.51 | | 0.10 | 0.42 | 0.42 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 680 | 1676 | | 178 | 1413 | 664 | 72 | 411 | | | 56 | 373 |
| v/s Ratio Prot | 0.19 | c0.58 | | c0.22 | 0.45 | | | 0.46 | | | | |
| v/s Ratio Perm | | | | | | 0.23 | 1.75 | | | | c3.45 | 0.17 |
| v/c Ratio | 0.99 | 1.13 | | 2.19 | 1.08 | 0.54 | 7.46 | 1.94 | | | 14.91 | 0.72 |
| Uniform Delay, d1 | 42.2 | 25.5 | | 47.3 | 30.5 | 22.9 | 40.1 | 40.1 | | | 40.1 | 37.0 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 30.6 | 65.4 | | 554.0 | 47.2 | 3.2 | 2934.8 | 430.3 | | | 6294.1 | 6.8 |
| Delay (s) | 72.7 | 90.9 | | 601.3 | 77.7 | 26.1 | 2975.0 | 470.4 | | | 6334.2 | 43.9 |
| Level of Service | E | F | | F | E | C | F | F | | | F | D |
| Approach Delay (s) | | 86.2 | | | 155.5 | | | 1455.7 | | | 4182.9 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 1043.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 5.00 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 172.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 1256 | 915 | 95 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1365 | 995 | 103 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | TWLTL | |
| Median storage veh) | | | | 2 | 2 | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1729 | 549 | 1098 | | | |
| vC1, stage 1 conf vol | 1046 | | | | | |
| vC2, stage 2 conf vol | 683 | | | | | |
| vCu, unblocked vol | 1729 | 549 | 1098 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | 5.8 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 259 | 485 | 643 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|
| Volume Total | 0 | 683 | 683 | 663 | 435 |
| Volume Left | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 0 | 103 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.40 | 0.40 | 0.39 | 0.26 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | | | |
| Approach Delay (s) | 0.0 | 0.0 | | 0.0 | |
| Approach LOS | A | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 38.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 182 | 3 | 3 | 1074 | 819 | 96 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | | 1.00 | 0.95 | 0.95 | |
| Frpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1806 | | 1805 | 3610 | 3543 | |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1806 | | 1805 | 3610 | 3543 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 198 | 3 | 3 | 1167 | 890 | 104 |
| RTOR Reduction (vph) | 1 | 0 | 0 | 0 | 8 | 0 |
| Lane Group Flow (vph) | 200 | 0 | 3 | 1167 | 986 | 0 |
| Confl. Peds. (#/hr) | | 5 | | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 15.3 | | 0.8 | 50.7 | 45.4 | |
| Effective Green, g (s) | 15.3 | | 0.8 | 50.7 | 45.4 | |
| Actuated g/C Ratio | 0.20 | | 0.01 | 0.68 | 0.61 | |
| Clearance Time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 368 | | 19 | 2440 | 2144 | |
| v/s Ratio Prot | c0.11 | | 0.00 | c0.32 | 0.28 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.54 | | 0.16 | 0.48 | 0.46 | |
| Uniform Delay, d1 | 26.7 | | 36.8 | 5.8 | 8.1 | |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.6 | | 3.9 | 0.7 | 0.7 | |
| Delay (s) | 28.4 | | 40.6 | 6.5 | 8.8 | |
| Level of Service | C | | D | A | A | |
| Approach Delay (s) | 28.4 | | | 6.6 | 8.8 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 49.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 493 | 36 | 32 | 41 | 95 | 286 | 22 | 298 | 21 | 84 | 550 | 188 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 536 | 39 | 35 | 45 | 103 | 311 | 24 | 324 | 23 | 91 | 598 | 204 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 610 | 459 | 371 | 893 |
| Volume Left (vph) | 536 | 45 | 24 | 91 |
| Volume Right (vph) | 35 | 311 | 23 | 204 |
| Hadj (s) | 0.14 | -0.39 | -0.02 | -0.12 |
| Departure Headway (s) | 9.7 | 9.1 | 9.5 | 9.4 |
| Degree Utilization, x | 1.0 | 1.0 | 0.98 | 1.0 |
| Capacity (veh/h) | 376 | 398 | 371 | 391 |
| Control Delay (s) | 322.1 | 127.4 | 73.6 | 628.8 |
| Approach Delay (s) | 322.1 | 127.4 | 73.6 | 628.8 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 361.8 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 132.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.293
Loss Time (sec): 12 Average Delay (sec/veh): 111.0
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 60 | 24 | 12 | 101 | 26 | 355 | 437 | 1963 | 54 | 17 | 2128 | 134 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 60 | 24 | 12 | 101 | 26 | 355 | 437 | 1963 | 54 | 17 | 2128 | 134 |
| Added Vol: | 3 | 0 | 0 | 0 | 0 | 7 | 5 | 33 | 3 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 63 | 24 | 12 | 101 | 26 | 362 | 442 | 1996 | 57 | 17 | 2172 | 134 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 68 | 26 | 13 | 110 | 28 | 393 | 480 | 2170 | 62 | 18 | 2361 | 146 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 68 | 26 | 13 | 110 | 28 | 393 | 480 | 2170 | 62 | 18 | 2361 | 146 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 68 | 26 | 13 | 110 | 28 | 393 | 480 | 2170 | 62 | 18 | 2361 | 146 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.64 | 0.64 | 0.64 | 0.69 | 0.69 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.64 | 0.24 | 0.12 | 0.80 | 0.20 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 772 | 294 | 147 | 1050 | 270 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.09 | 0.09 | 0.10 | 0.10 | 0.24 | 0.27 | 0.60 | 0.04 | 0.01 | 0.65 | 0.09 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.21 | 0.62 | 0.62 | 0.09 | 0.51 | 0.51 |
| Volume/Cap: | 0.47 | 0.47 | 0.47 | 0.55 | 0.55 | 1.29 | 1.29 | 0.96 | 0.06 | 0.12 | 1.29 | 0.18 |
| Delay/Veh: | 44.9 | 44.9 | 44.9 | 46.9 | 46.9 | 202.9 | 198.3 | 32.5 | 8.8 | 50.9 | 166 | 16.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 44.9 | 44.9 | 44.9 | 46.9 | 46.9 | 202.9 | 198.3 | 32.5 | 8.8 | 50.9 | 166 | 16.2 |
| LOS by Move: | D | D | D | D | D | F | F | C | A | D | F | B |
| HCM2kAvgQ: | 4 | 4 | 4 | 5 | 5 | 28 | 33 | 45 | 1 | 1 | 81 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.935
Loss Time (sec): 12 Average Delay (sec/veh): 62.7
Optimal Cycle: OPTIMIZED Level Of Service: E

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 32 | 32 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 3 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 387 | 0 | 408 | 0 | 0 | 0 | 0 | 1620 | 352 | 366 | 1904 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 387 | 0 | 408 | 0 | 0 | 0 | 0 | 1620 | 352 | 366 | 1904 | 0 |
| Added Vol: | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 8 | 0 | 34 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 397 | 0 | 408 | 0 | 0 | 0 | 0 | 1646 | 360 | 366 | 1938 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 432 | 0 | 443 | 0 | 0 | 0 | 0 | 1789 | 391 | 398 | 2107 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 432 | 0 | 443 | 0 | 0 | 0 | 0 | 1789 | 391 | 398 | 2107 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 432 | 0 | 443 | 0 | 0 | 0 | 0 | 1789 | 391 | 398 | 2107 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.85 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1805 | 0 | 1615 | 0 | 0 | 0 | 0 | 5187 | 1615 | 1805 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.24 | 0.00 | 0.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.34 | 0.24 | 0.22 | 0.58 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.33 | 0.00 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.32 | 0.32 | 0.23 | 0.55 | 0.00 |
| Volume/Cap: | 0.72 | 0.00 | 0.83 | 0.00 | 0.00 | 0.00 | 0.00 | 1.08 | 0.76 | 0.96 | 1.06 | 0.00 |
| Delay/Veh: | 33.9 | 0.0 | 41.7 | 0.0 | 0.0 | 0.0 | 0.0 | 80.4 | 36.9 | 71.5 | 61.1 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 33.9 | 0.0 | 41.7 | 0.0 | 0.0 | 0.0 | 0.0 | 80.4 | 36.9 | 71.5 | 61.1 | 0.0 |
| LOS by Move: | C | A | D | A | A | A | A | F | D | E | E | A |
| HCM2kAvgQ: | 13 | 0 | 15 | 0 | 0 | 0 | 0 | 31 | 12 | 17 | 47 | 0 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 2.553
Loss Time (sec): 12 Average Delay (sec/veh): 319.3
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 1 | 0 | 1 0 | 0 0 | 1! 0 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 297 | 507 | 299 | 675 | 412 | 193 | 241 | 1605 | 345 | 213 | 1696 | 704 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 297 | 507 | 299 | 675 | 412 | 193 | 241 | 1605 | 345 | 213 | 1696 | 704 |
| Added Vol: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 5 | 0 | 24 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 304 | 507 | 299 | 675 | 412 | 193 | 241 | 1623 | 350 | 213 | 1720 | 704 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 330 | 551 | 325 | 734 | 448 | 210 | 262 | 1764 | 380 | 232 | 1870 | 765 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 330 | 551 | 325 | 734 | 448 | 210 | 262 | 1764 | 380 | 232 | 1870 | 765 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 330 | 551 | 325 | 734 | 448 | 210 | 262 | 1764 | 380 | 232 | 1870 | 765 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 | 0.50 | 0.50 | 0.85 | 0.95 | 0.91 | 0.91 |
| Lanes: | 1.00 | 1.26 | 0.74 | 0.53 | 0.32 | 0.15 | 0.26 | 1.74 | 1.00 | 1.00 | 1.42 | 0.58 |
| Final Sat.: | 1709 | 2149 | 1268 | 956 | 584 | 273 | 245 | 1647 | 1615 | 1805 | 2451 | 1003 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.26 | 0.26 | 0.77 | 0.77 | 0.77 | 1.07 | 1.07 | 0.24 | 0.13 | 0.76 | 0.76 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.56 | 0.74 | 0.74 | xxxx | xxxx | xxxx | 2.88 | 2.88 | 0.63 | 1.00 | 1.53 | 1.53 |
| Delay/Veh: | 21.0 | 24.3 | 24.3 | 0.0 | 0.0 | 0.0 | 874.8 | 875 | 22.4 | 93.3 | 259 | 258.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 21.0 | 24.3 | 24.3 | 0.0 | 0.0 | 0.0 | 874.8 | 875 | 22.4 | 93.3 | 259 | 258.9 |
| LOS by Move: | C | C | C | A | A | A | F | F | C | F | F | F |
| HCM2kAvgQ: | 7 | 11 | 11 | 30 | 30 | 30 | 112 | 112 | 8 | 10 | 93 | 93 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.517
Loss Time (sec): 12 Average Delay (sec/veh): 218.7
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 274 | 31 | 267 | 371 | 25 | 78 | 226 | 1950 | 303 | 312 | 2271 | 120 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 274 | 31 | 267 | 371 | 25 | 78 | 226 | 1950 | 303 | 312 | 2271 | 120 |
| Added Vol: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 10 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 281 | 31 | 267 | 371 | 25 | 78 | 226 | 1958 | 308 | 312 | 2281 | 120 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 305 | 34 | 290 | 403 | 27 | 85 | 246 | 2128 | 335 | 339 | 2479 | 130 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 305 | 34 | 290 | 403 | 27 | 85 | 246 | 2128 | 335 | 339 | 2479 | 130 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 305 | 34 | 290 | 403 | 27 | 85 | 246 | 2128 | 335 | 339 | 2479 | 130 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.66 | 0.87 | 0.87 | 0.39 | 0.89 | 0.89 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.10 | 0.90 | 1.00 | 0.24 | 0.76 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1260 | 171 | 1474 | 743 | 409 | 1275 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.24 | 0.20 | 0.20 | 0.54 | 0.07 | 0.07 | 0.14 | 0.59 | 0.21 | 0.19 | 0.69 | 0.08 |
| Crit Moves: | | | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.09 | 0.41 | 0.41 | 0.13 | 0.45 | 0.45 |
| Volume/Cap: | 0.68 | 0.55 | 0.55 | 1.52 | 0.19 | 0.19 | 1.52 | 1.43 | 0.50 | 1.43 | 1.52 | 0.18 |
| Delay/Veh: | 36.8 | 31.9 | 31.9 | 289.8 | 26.7 | 26.7 | 316.5 | 234 | 26.9 | 269.8 | 269 | 19.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.8 | 31.9 | 31.9 | 289.8 | 26.7 | 26.7 | 316.5 | 234 | 26.9 | 269.8 | 269 | 19.7 |
| LOS by Move: | D | C | C | F | C | C | F | F | C | F | F | B |
| HCM2kAvgQ: | 11 | 10 | 10 | 33 | 3 | 3 | 21 | 83 | 9 | 27 | 102 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 2.206
Loss Time (sec): 16 Average Delay (sec/veh): 422.2
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 364 | 623 | 48 | 587 | 520 | 517 | 472 | 1578 | 343 | 75 | 1888 | 587 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 364 | 623 | 48 | 587 | 520 | 517 | 472 | 1578 | 343 | 75 | 1888 | 587 |
| Added Vol: | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 12 | 0 | 13 | 13 | 13 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 364 | 623 | 60 | 599 | 520 | 517 | 472 | 1590 | 343 | 88 | 1901 | 600 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 390 | 667 | 64 | 641 | 557 | 554 | 505 | 1702 | 367 | 94 | 2035 | 642 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 390 | 667 | 64 | 641 | 557 | 554 | 505 | 1702 | 367 | 94 | 2035 | 642 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 390 | 667 | 64 | 641 | 557 | 554 | 505 | 1702 | 367 | 94 | 2035 | 642 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.82 | 0.18 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3250 | 313 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.22 | 0.21 | 0.21 | 0.36 | 0.15 | 0.34 | 0.28 | 0.47 | 0.23 | 0.05 | 1.07 | 0.40 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.15 | 0.28 | 0.28 | 0.12 | 0.24 | 0.24 | 0.10 | 0.39 | 0.39 | 0.08 | 0.37 | 0.37 |
| Volume/Cap: | 1.40 | 0.75 | 0.75 | 2.88 | 0.63 | 1.40 | 2.88 | 1.22 | 0.59 | 0.63 | 2.88 | 1.07 |
| Delay/Veh: | 252.4 | 42.9 | 42.9 | 912.7 | 42.0 | 241.4 | 917.5 | 144 | 30.9 | 61.3 | 890 | 94.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 252.4 | 42.9 | 42.9 | 912.7 | 42.0 | 241.4 | 917.5 | 144 | 30.9 | 61.3 | 890 | 94.9 |
| LOS by Move: | F | D | D | F | D | F | F | F | C | E | F | F |
| HCM2kAvgQ: | 30 | 14 | 14 | 75 | 10 | 41 | 60 | 55 | 11 | 4 | 236 | 33 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.690 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 228.8 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Lanes: | 0 | 0 | 1! | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1! | 0 | 0 | 0 | 0 | 1! | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 15 | 24 | 21 | | 217 | 21 | 174 | | 252 | 551 | 22 | | 29 | 565 | 135 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 15 | 24 | 21 | | 217 | 21 | 174 | | 252 | 551 | 22 | | 29 | 565 | 135 | |
| Added Vol: | 0 | 0 | 0 | | 8 | 0 | 0 | | 0 | 17 | 0 | | 0 | 17 | 8 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 15 | 24 | 21 | | 225 | 21 | 174 | | 252 | 568 | 22 | | 29 | 582 | 143 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | |
| PHF Volume: | 16 | 26 | 23 | | 244 | 23 | 188 | | 273 | 615 | 24 | | 31 | 630 | 155 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 16 | 26 | 23 | | 244 | 23 | 188 | | 273 | 615 | 24 | | 31 | 630 | 155 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 16 | 26 | 23 | | 244 | 23 | 188 | | 273 | 615 | 24 | | 31 | 630 | 155 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Lanes: | 0.25 | 0.40 | 0.35 | | 1.00 | 0.11 | 0.89 | | 0.30 | 0.67 | 0.03 | | 0.04 | 0.77 | 0.19 | |
| Final Sat.: | 104 | 166 | 145 | | 437 | 55 | 452 | | 161 | 364 | 14 | | 21 | 426 | 105 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | 0.16 | | 0.56 | 0.42 | 0.42 | | 1.69 | 1.69 | 1.69 | | 1.48 | 1.48 | 1.48 | |
| Crit Moves: | | **** | | | **** | | | | **** | | | | | **** | | |
| Delay/Veh: | 13.0 | 13.0 | 13.0 | | 20.7 | 14.8 | 14.8 | | 335.8 | 336 | 335.8 | | 243.8 | 244 | 243.8 | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 13.0 | 13.0 | 13.0 | | 20.7 | 14.8 | 14.8 | | 335.8 | 336 | 335.8 | | 243.8 | 244 | 243.8 | |
| LOS by Move: | B | B | B | | C | B | B | | F | F | F | | F | F | F | |
| ApproachDel: | 13.0 | | | | 18.0 | | | | 335.8 | | | | 243.8 | | | |
| Delay Adj: | 1.00 | | | | 1.00 | | | | 1.00 | | | | 1.00 | | | |
| ApprAdjDel: | 13.0 | | | | 18.0 | | | | 335.8 | | | | 243.8 | | | |
| LOS by Appr: | B | | | | C | | | | F | | | | F | | | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.2 | | 1.2 | 0.7 | 0.7 | | 48.8 | 48.8 | 48.8 | | 35.9 | 35.9 | 35.9 | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 625 | 1230 | 102 | 981 | 1327 | 471 | 232 | 1109 | 687 | 704 | 866 | 591 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.96 | | 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) | 1805 | 5121 | | 3367 | 3453 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5121 | | 3367 | 3453 | | 1805 | 3610 | 1499 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 631 | 1242 | 103 | 991 | 1340 | 476 | 234 | 1120 | 694 | 711 | 875 | 597 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| Lane Group Flow (vph) | 631 | 1337 | 0 | 991 | 1785 | 0 | 234 | 1120 | 694 | 711 | 875 | 514 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 4% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 7.8 | 43.0 | 43.0 | 5.0 | 40.2 | 40.2 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 7.8 | 43.0 | 43.0 | 5.0 | 40.2 | 40.2 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.07 | 0.37 | 0.37 | 0.04 | 0.35 | 0.35 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1803 | | 161 | 1222 | | 122 | 1349 | 560 | 78 | 1261 | 555 |
| v/s Ratio Prot | c0.35 | 0.26 | | 0.29 | c0.52 | | c0.13 | 0.31 | | c0.39 | 0.24 | |
| v/s Ratio Perm | | | | | | | | | c0.46 | | | 0.32 |
| v/c Ratio | 7.60 | 0.74 | | 6.16 | 1.46 | | 1.92 | 0.83 | 1.24 | 9.12 | 0.69 | 0.93 |
| Uniform Delay, d1 | 54.9 | 32.7 | | 54.8 | 37.1 | | 53.6 | 32.7 | 36.0 | 55.0 | 32.1 | 36.0 |
| Progression Factor | 1.00 | 1.00 | | 0.91 | 0.71 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2995.8 | 2.8 | | 2321.1 | 207.7 | | 441.9 | 4.3 | 122.3 | 3677.7 | 1.4 | 21.2 |
| Delay (s) | 3050.7 | 35.5 | | 2371.0 | 234.3 | | 495.5 | 37.0 | 158.3 | 3732.7 | 33.5 | 57.1 |
| Level of Service | F | D | | F | F | | F | D | F | F | C | E |
| Approach Delay (s) | | 998.3 | | | 988.6 | | | 130.5 | | | 1244.8 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 857.8 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.15 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 174.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 55 | 5 | 83 | 70 | 5 | 56 | 104 | 1997 | 109 | 32 | 2159 | 177 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 55 | 5 | 83 | 70 | 5 | 56 | 104 | 1997 | 109 | 32 | 2159 | 177 | | | | | | | | | | | | |
| Added Vol: | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 41 | 0 | 13 | 42 | 13 | | | | | | | | | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Initial Fut: | 55 | 5 | 95 | 82 | 5 | 56 | 104 | 2038 | 109 | 45 | 2201 | 190 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | | | | | | | | | | |
| PHF Volume: | 57 | 5 | 99 | 85 | 5 | 58 | 108 | 2114 | 113 | 47 | 2283 | 197 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| FinalVolume: | 57 | 5 | 99 | 85 | 5 | 58 | 108 | 2114 | 113 | 47 | 2283 | 197 | | | | | | | | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx | | | | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx | | | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 4893 | 4960 | 2171 | 4913 | 4918 | 2382 | 2480 | xxxx | xxxxx | 2227 | xxxx | xxxxx | | | | | | | | | | | | |
| Potent Cap.: | 0 | 1 | 60 | 0 | 1 | 44 | 189 | xxxx | xxxxx | 237 | xxxx | xxxxx | | | | | | | | | | | | |
| Move Cap.: | 0 | 0 | 60 | 0 | 0 | 44 | 189 | xxxx | xxxxx | 237 | xxxx | xxxxx | | | | | | | | | | | | |
| Volume/Cap: | xxxx | 25.86 | 1.65 | xxxx | 24.17 | 1.31 | 0.57 | xxxx | xxxx | 0.20 | xxxx | xxxx | | | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | 9.0 | xxxx | xxxx | 5.6 | 3.1 | xxxx | xxxxx | 0.7 | xxxx | xxxxx | | | | | | | | | | | | |
| Control Del: | xxxxx | xxxx | 467.3 | xxxxx | xxxx | 384.7 | 46.9 | xxxx | xxxxx | 23.9 | xxxx | xxxxx | | | | | | | | | | | | |
| LOS by Move: | * | * | F | * | * | F | E | * | * | C | * | * | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 0 | xxxx | xxxxx | 0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | | | | | | |
| ApproachDel: | +Inf | | | +Inf | | | xxxxxx | | | xxxxxx | | | | | | | | | | | | | | |
| ApproachLOS: | F | | | F | | | * | | | * | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 60 Critical Vol./Cap.(X): 12.973
Loss Time (sec): 12 Average Delay (sec/veh): 2420.5
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1111 | 842 | 324 | 211 | 631 | 438 | 375 | 851 | 1003 | 522 | 755 | 274 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1111 | 842 | 324 | 211 | 631 | 438 | 375 | 851 | 1003 | 522 | 755 | 274 |
| Added Vol: | 67 | 13 | 0 | 0 | 12 | 0 | 0 | 0 | 66 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1178 | 855 | 324 | 211 | 643 | 438 | 375 | 851 | 1069 | 522 | 755 | 274 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 1260 | 914 | 347 | 226 | 688 | 468 | 401 | 910 | 1143 | 558 | 807 | 293 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1260 | 914 | 347 | 226 | 688 | 468 | 401 | 910 | 1143 | 558 | 807 | 293 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1260 | 914 | 347 | 226 | 688 | 468 | 401 | 910 | 1143 | 558 | 807 | 293 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.96 | 0.96 | 0.95 | 1.00 | 0.85 | 0.62 | 0.62 | 0.85 | 0.09 | 0.09 | 0.09 |
| Lanes: | 1.00 | 0.73 | 0.27 | 1.00 | 1.00 | 1.00 | 0.31 | 0.69 | 1.00 | 0.33 | 0.49 | 0.18 |
| Final Sat.: | 1805 | 1321 | 501 | 1805 | 1900 | 1615 | 361 | 819 | 1615 | 60 | 87 | 31 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.70 | 0.69 | 0.69 | 0.13 | 0.36 | 0.29 | 1.11 | 1.11 | 0.71 | 9.32 | 9.32 | 9.32 |
| Crit Moves: | **** | | | | **** | | | | | | **** | |
| Green/Cycle: | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.47 | 0.47 | 0.63 | 0.47 | 0.47 | 0.47 |
| Volume/Cap: | 4.19 | 4.15 | 4.15 | 0.75 | 2.17 | 1.74 | 2.38 | 2.38 | 1.12 | 19.97 | 19.97 | 19.97 |
| Delay/Veh: | 1467 | 1451 | 1451 | 33.9 | 563 | 373.2 | 643.2 | 643 | 77.3 | 8574 | 8574 | 8574 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 1467 | 1451 | 1451 | 33.9 | 563 | 373.2 | 643.2 | 643 | 77.3 | 8574 | 8574 | 8574 |
| LOS by Move: | F | F | F | C | F | F | F | F | E | F | F | F |
| HCM2kAvgQ: | 142 | 142 | 142 | 6 | 60 | 35 | 119 | 119 | 41 | 226 | 226 | 226 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 379 | 1136 | 212 | 610 | 915 | 1126 | 190 | 680 | 739 | 1232 | 691 | 97 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3428 | | 3367 | 1827 | 2797 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3428 | | 3367 | 1827 | 2797 | 1805 | 1900 | 1568 | 3502 | 3610 | 1586 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 408 | 1222 | 228 | 656 | 984 | 1211 | 204 | 731 | 795 | 1325 | 743 | 104 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 24 | 0 | 0 | 70 | 0 | 0 | 78 |
| Lane Group Flow (vph) | 408 | 1437 | 0 | 656 | 984 | 1187 | 204 | 731 | 725 | 1325 | 743 | 26 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 4% | 4% | 0% | 0% | 0% | 3% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.4 | 30.4 | | 25.4 | 44.7 | 75.1 | 15.0 | 14.7 | 40.1 | 30.4 | 30.1 | 30.1 |
| Effective Green, g (s) | 10.4 | 30.4 | | 25.4 | 44.7 | 75.1 | 15.0 | 14.7 | 40.1 | 30.4 | 30.1 | 30.1 |
| Actuated g/C Ratio | 0.09 | 0.25 | | 0.21 | 0.37 | 0.63 | 0.12 | 0.12 | 0.33 | 0.25 | 0.25 | 0.25 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 303 | 868 | | 712 | 680 | 1750 | 225 | 232 | 523 | 887 | 905 | 397 |
| v/s Ratio Prot | 0.12 | c0.42 | | 0.19 | c0.54 | 0.17 | 0.11 | c0.38 | c0.29 | c0.38 | 0.21 | |
| v/s Ratio Perm | | | | | | 0.25 | | | 0.17 | | | 0.02 |
| v/c Ratio | 1.35 | 1.66 | | 0.92 | 1.45 | 0.68 | 0.91 | 3.15 | 1.39 | 1.49 | 0.82 | 0.07 |
| Uniform Delay, d1 | 54.8 | 44.8 | | 46.3 | 37.6 | 14.6 | 51.8 | 52.6 | 40.0 | 44.8 | 42.4 | 34.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 176.4 | 300.3 | | 17.1 | 209.4 | 0.8 | 34.8 | 979.1 | 185.5 | 228.2 | 8.3 | 0.3 |
| Delay (s) | 231.2 | 345.1 | | 63.4 | 247.1 | 15.4 | 86.6 | 1031.8 | 225.4 | 273.0 | 50.7 | 34.6 |
| Level of Service | F | F | | E | F | B | F | F | F | F | D | C |
| Approach Delay (s) | | 320.1 | | | 106.4 | | | 549.8 | | | 185.5 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 261.5 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.77 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 146.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 809 | 1102 | 709 | 622 | 1765 | 266 | 318 | 956 | 676 | 485 | 750 | 696 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.98 | | 1.00 | 0.94 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4733 | | 3502 | 3441 | | 1805 | 3362 | | 1805 | 3323 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.09 | 1.00 | | 0.09 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4733 | | 3502 | 3441 | | 177 | 3362 | | 177 | 3323 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 861 | 1172 | 754 | 662 | 1878 | 283 | 338 | 1017 | 719 | 516 | 798 | 740 |
| RTOR Reduction (vph) | 0 | 30 | 0 | 0 | 10 | 0 | 0 | 111 | 0 | 0 | 105 | 0 |
| Lane Group Flow (vph) | 861 | 1896 | 0 | 662 | 2151 | 0 | 338 | 1625 | 0 | 516 | 1433 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1852 | | 319 | 1436 | | 66 | 1257 | | 66 | 1242 | |
| v/s Ratio Prot | c0.48 | 0.40 | | c0.19 | c0.62 | | | 0.48 | | | 0.43 | |
| v/s Ratio Perm | | | | | | | 1.91 | | | c2.92 | | |
| v/c Ratio | 7.36 | 1.15dr | | 2.08 | 1.50 | | 5.12 | 1.29 | | 7.82 | 1.15 | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Progression Factor | 0.99 | 1.01 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2863.1 | 13.6 | | 494.5 | 227.6 | | 1887.8 | 137.9 | | 3099.1 | 78.9 | |
| Delay (s) | 2916.5 | 48.7 | | 546.8 | 261.1 | | 1923.8 | 173.9 | | 3135.1 | 114.9 | |
| Level of Service | F | D | | F | F | | F | F | | F | F | |
| Approach Delay (s) | | 934.7 | | | 328.1 | | | 459.0 | | | 873.6 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 644.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.74 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 196.1% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1896 | 608 | 767 | 1596 | 0 | 0 | 0 | 0 | 839 | 0 | 710 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 2061 | 661 | 834 | 1735 | 0 | 0 | 0 | 0 | 912 | 0 | 772 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 2061 | 661 | 834 | 1735 | 1684 |
| Volume Left (vph) | 0 | 0 | 834 | 0 | 912 |
| Volume Right (vph) | 0 | 661 | 0 | 0 | 772 |
| Hadj (s) | 0.05 | -0.57 | 0.64 | 0.02 | -0.07 |
| Departure Headway (s) | 7.1 | 3.2 | 8.2 | 7.6 | 6.9 |
| Degree Utilization, x | 1.0 | 0.59 | 1.0 | 1.0 | 1.0 |
| Capacity (veh/h) | 511 | 1118 | 444 | 479 | 525 |
| Control Delay (s) | 1407.6 | 10.6 | 433.0 | 1217.8 | 1024.9 |
| Approach Delay (s) | 1068.4 | | 963.1 | | 1024.9 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 1019.1 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 385.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 2070 | 1037 | 768 | 2150 | 0 | 0 | 0 | 0 | 881 | 0 | 842 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.92 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1513 | 1504 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | | 3574 | 1615 | 3467 | 3574 | | | | | 1681 | 1513 | 1504 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 2179 | 1092 | 808 | 2263 | 0 | 0 | 0 | 0 | 927 | 0 | 886 |
| RTOR Reduction (vph) | 0 | 0 | 306 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 2179 | 786 | 808 | 2263 | 0 | 0 | 0 | 0 | 630 | 551 | 520 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 2% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.40 | 0.40 | 0.23 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1439 | 650 | 800 | 2414 | | | | | 377 | 339 | 337 |
| v/s Ratio Prot | | c0.61 | | 0.23 | c0.63 | | | | | c0.37 | 0.36 | 0.35 |
| v/s Ratio Perm | | | 0.49 | | | | | | | | | |
| v/c Ratio | | 1.51 | 1.21 | 1.01 | 0.94 | | | | | 1.67 | 1.63 | 1.54 |
| Uniform Delay, d1 | | 32.9 | 32.9 | 42.3 | 15.8 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 235.0 | 107.8 | 34.3 | 8.6 | | | | | 313.4 | 294.8 | 258.9 |
| Delay (s) | | 267.9 | 140.7 | 76.6 | 24.4 | | | | | 356.1 | 337.5 | 301.6 |
| Level of Service | | F | F | E | C | | | | | F | F | F |
| Approach Delay (s) | | 225.4 | | | 38.1 | | | 0.0 | | | 332.5 | |
| Approach LOS | | F | | | D | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 178.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.42 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 198.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 1027 | 286 | 290 | 747 | 0 | 0 | 0 | 0 | 628 | 0 | 441 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 1116 | 311 | 315 | 812 | 0 | 0 | 0 | 0 | 683 | 0 | 479 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 812 | | | 1427 | | | 2798 | 2559 | 1116 | 2559 | 2870 | 812 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 812 | | | 1427 | | | 2798 | 2559 | 1116 | 2559 | 2870 | 812 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 34 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 823 | | | 476 | | | 0 | 9 | 255 | 8 | 6 | 376 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 1116 | 311 | 315 | 812 | 1162 |
| Volume Left | 0 | 0 | 315 | 0 | 683 |
| Volume Right | 0 | 311 | 0 | 0 | 479 |
| cSH | 1700 | 1700 | 476 | 1700 | 13 |
| Volume to Capacity | 0.66 | 0.18 | 0.66 | 0.48 | 91.78 |
| Queue Length 95th (ft) | 0 | 0 | 119 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 26.1 | 0.0 | Err |
| Lane LOS | | | D | | F |
| Approach Delay (s) | 0.0 | | 7.3 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3128.5 | | |
| Intersection Capacity Utilization | 185.2% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 770 | 1965 | 0 | 0 | 1947 | 551 | 416 | 0 | 745 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 837 | 2136 | 0 | 0 | 2116 | 599 | 452 | 0 | 810 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2715 | | | 2136 | | | 6226 | 6525 | 2136 | 7035 | 6226 | 2416 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2715 | | | 2136 | | | 6226 | 6525 | 2136 | 7035 | 6226 | 2416 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 147 | | | 257 | | | 0 | 0 | 63 | 0 | 0 | 42 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 837 | 2136 | 2715 | 1262 |
| Volume Left | 837 | 0 | 0 | 452 |
| Volume Right | 0 | 0 | 599 | 810 |
| cSH | 147 | 1700 | 1700 | 0 |
| Volume to Capacity | 5.70 | 1.26 | 1.60 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 2174.9 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 612.3 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 385.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 670 | 2281 | 0 | 0 | 1805 | 832 | 1113 | 0 | 1008 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.93 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (prot) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1543 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | | |
| Satd. Flow (perm) | 1736 | 5085 | | | 5136 | 1509 | 1698 | 1543 | 1504 | | | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 691 | 2352 | 0 | 0 | 1861 | 858 | 1147 | 0 | 1039 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 408 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 691 | 2352 | 0 | 0 | 1861 | 450 | 757 | 669 | 632 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 4% | 2% | 0% | 0% | 1% | 5% | 1% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 393 | 3067 | | | 1672 | 491 | 466 | 423 | 412 | | | |
| v/s Ratio Prot | c0.40 | 0.46 | | | c0.36 | | c0.45 | 0.43 | 0.42 | | | |
| v/s Ratio Perm | | | | | | 0.30 | | | | | | |
| v/c Ratio | 1.76 | 0.77 | | | 1.11 | 0.92 | 1.62 | 1.58 | 1.53 | | | |
| Uniform Delay, d1 | 34.8 | 13.2 | | | 30.4 | 29.2 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 351.5 | 1.9 | | | 59.9 | 24.4 | 290.7 | 273.0 | 252.4 | | | |
| Delay (s) | 386.3 | 15.1 | | | 90.2 | 53.6 | 323.4 | 305.6 | 285.1 | | | |
| Level of Service | F | B | | | F | D | F | F | F | | | |
| Approach Delay (s) | | 99.4 | | | 78.7 | | | 305.2 | | | 0.0 | |
| Approach LOS | | F | | | E | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 148.9 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.46 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 198.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 546 | 1109 | 0 | 0 | 637 | 415 | 400 | 0 | 337 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 593 | 1205 | 0 | 0 | 692 | 451 | 435 | 0 | 366 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1143 | | | 1205 | | | 3310 | 3536 | 1205 | 3677 | 3310 | 918 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1143 | | | 1205 | | | 3310 | 3536 | 1205 | 3677 | 3310 | 918 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 1 | | | 100 | | | 0 | 100 | 0 | 0 | 100 | 100 |
| cM capacity (veh/h) | 600 | | | 586 | | | 0 | 0 | 226 | 0 | 0 | 332 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 593 | 1205 | 1143 | 801 |
| Volume Left | 593 | 0 | 0 | 435 |
| Volume Right | 0 | 0 | 451 | 366 |
| cSH | 600 | 1700 | 1700 | 1 |
| Volume to Capacity | 0.99 | 0.71 | 0.67 | 1326.72 |
| Queue Length 95th (ft) | 363 | 0 | 0 | Err |
| Control Delay (s) | 60.2 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 19.9 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2149.3 | | |
| Intersection Capacity Utilization | 185.2% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Uncontrolled | | | | | | Uncontrolled | | | | | | Stop Sign | | | | | | Stop Sign | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 292 | 154 | | 32 | | 12 | 61 | | 80 | | | 96 | 643 | | 406 | | 43 | 568 | | 13 | | | | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | | |
| Initial Bse: | 292 | 154 | | 32 | | 12 | 61 | | 80 | | | 96 | 643 | | 406 | | 43 | 568 | | 13 | | | | |
| Added Vol: | 0 | 8 | | 13 | | 0 | 8 | | 0 | | | 0 | 0 | | 0 | | 12 | 0 | | 0 | | | | |
| PasserByVol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | | | |
| Initial Fut: | 292 | 162 | | 45 | | 12 | 69 | | 80 | | | 96 | 643 | | 406 | | 55 | 568 | | 13 | | | | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | | | |
| PHF Volume: | 317 | 176 | | 49 | | 13 | 75 | | 87 | | | 104 | 699 | | 441 | | 60 | 617 | | 14 | | | | |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | | | |
| FinalVolume: | 317 | 176 | | 49 | | 13 | 75 | | 87 | | | 104 | 699 | | 441 | | 60 | 617 | | 14 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | | | 4.1 | xxxx | xxxxx | | | | 7.1 | 6.5 | | 6.2 | | 7.1 | 6.5 | | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | | | 2.2 | xxxx | xxxxx | | | | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 162 | xxxx | xxxxx | | | 225 | xxxx | xxxxx | | | | 1252 | 961 | | 75 | | 1526 | 999 | | 176 | | | | |
| Potent Cap.: | 1429 | xxxx | xxxxx | | | 1356 | xxxx | xxxxx | | | | 151 | 258 | | 992 | | 97 | 245 | | 872 | | | | |
| Move Cap.: | 1429 | xxxx | xxxxx | | | 1356 | xxxx | xxxxx | | | | 0 | 187 | | 992 | | 0 | 178 | | 872 | | | | |
| Volume/Cap: | 0.22 | xxxx | xxxx | | | 0.01 | xxxx | xxxx | | | | xxxx | 3.74 | | 0.44 | | xxxx | 3.48 | | 0.02 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.9 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | | | |
| Control Del: | 8.2 | xxxx | xxxxx | | | 7.7 | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | | | |
| LOS by Move: | A | * | * | | | A | * | * | | | | * | * | * | | | * | * | * | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | LT | - | LTR | - | RT | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | xxxx | xxxx | xxxxx | | | | xxxx | 0 | xxxxx | | | xxxx | 0 | xxxxx | | | | | |
| SharedQueue: | 0.9 | xxxx | xxxxx | | | 0.0 | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | | | |
| Shrd ConDel: | 8.2 | xxxx | xxxxx | | | 7.7 | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | xxxxx | xxxx | xxxxx | | | | | |
| Shared LOS: | A | * | * | | | A | * | * | | | | * | * | * | | | * | * | * | | | | | |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | | xxxxxx | | | | | xxxxxx | | | | | | | |
| ApproachLOS: | * | | | | | * | | | | | | F | | | | | F | | | | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 43 | 0 | 0 | 17 | 0 | 219 | 44 | 0 | 620 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 0 | 0 | 50 | 0 | 0 | 20 | 0 | 255 | 51 | 0 | 721 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 995 | 1027 | 721 | 1026 | 987 | 255 | 733 | | | 306 | | |
| vC1, stage 1 conf vol | 721 | 721 | | 255 | 255 | | | | | | | |
| vC2, stage 2 conf vol | 274 | 306 | | 771 | 733 | | | | | | | |
| vCu, unblocked vol | 995 | 1027 | 721 | 1026 | 987 | 255 | 733 | | | 306 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 88 | 100 | 100 | 97 | 100 | | | 100 | | |
| cM capacity (veh/h) | 391 | 400 | 431 | 332 | 401 | 789 | 881 | | | 1266 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 50 | 20 | 255 | 51 | 721 | 12 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 50 | 20 | 0 | 51 | 0 | 12 |
| cSH | 431 | 789 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.12 | 0.03 | 0.15 | 0.03 | 0.42 | 0.01 |
| Queue Length 95th (ft) | 10 | 2 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 14.5 | 9.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 14.5 | 9.7 | 0.0 | | 0.0 | |
| Approach LOS | B | A | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 42.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 5 | 25 | 144 | 5 | 23 | 55 | 224 | 44 | 143 | 510 | 10 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 18 | 6 | 30 | 171 | 6 | 27 | 65 | 267 | 52 | 170 | 607 | 12 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1376 | 1398 | 607 | 1378 | 1357 | 267 | 619 | | | 319 | | |
| vC1, stage 1 conf vol | 948 | 948 | | 398 | 398 | | | | | | | |
| vC2, stage 2 conf vol | 428 | 450 | | 980 | 960 | | | | | | | |
| vCu, unblocked vol | 1376 | 1398 | 607 | 1378 | 1357 | 267 | 619 | | | 319 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 92 | 98 | 94 | 0 | 97 | 96 | 93 | | | 86 | | |
| cM capacity (veh/h) | 233 | 248 | 500 | 170 | 217 | 777 | 971 | | | 1252 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 54 | 205 | 65 | 267 | 52 | 170 | 607 | 12 |
| Volume Left | 18 | 171 | 65 | 0 | 0 | 170 | 0 | 0 |
| Volume Right | 30 | 27 | 0 | 0 | 52 | 0 | 0 | 12 |
| cSH | 334 | 191 | 971 | 1700 | 1700 | 1252 | 1700 | 1700 |
| Volume to Capacity | 0.16 | 1.07 | 0.07 | 0.16 | 0.03 | 0.14 | 0.36 | 0.01 |
| Queue Length 95th (ft) | 14 | 241 | 5 | 0 | 0 | 12 | 0 | 0 |
| Control Delay (s) | 17.8 | 136.5 | 9.0 | 0.0 | 0.0 | 8.3 | 0.0 | 0.0 |
| Lane LOS | C | F | A | | | A | | |
| Approach Delay (s) | 17.8 | 136.5 | 1.5 | | | 1.8 | | |
| Approach LOS | C | F | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 21.6 | | |
| Intersection Capacity Utilization | 56.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 65 | 184 | 30 | 139 | 543 | 30 | 34 | 230 | 208 | 211 | 355 | 113 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 71 | 200 | 33 | 151 | 590 | 33 | 37 | 250 | 226 | 229 | 386 | 123 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1671 | 1456 | 447 | 1476 | 1404 | 363 | 509 | | | 476 | | |
| vC1, stage 1 conf vol | 906 | 906 | | 437 | 437 | | | | | | | |
| vC2, stage 2 conf vol | 765 | 550 | | 1039 | 967 | | | | | | | |
| vCu, unblocked vol | 1671 | 1456 | 447 | 1476 | 1404 | 363 | 509 | | | 476 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 6 | 95 | 0 | 0 | 95 | 97 | | | 79 | | |
| cM capacity (veh/h) | 0 | 213 | 616 | 24 | 216 | 686 | 1067 | | | 1097 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 303 | 774 | 513 | 738 |
| Volume Left | 71 | 151 | 37 | 229 |
| Volume Right | 33 | 33 | 226 | 123 |
| cSH | 0 | 86 | 1067 | 1097 |
| Volume to Capacity | Err | 9.03 | 0.03 | 0.21 |
| Queue Length 95th (ft) | Err | Err | 3 | 20 |
| Control Delay (s) | Err | Err | 1.0 | 4.7 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | Err | Err | 1.0 | 4.7 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 122.1% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.812 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 214.1 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Stop Sign | | | | | | Stop Sign | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 5 | 93 | 5 | 393 | 333 | 484 | 5 | 5 | 378 | 101 | | | | | | | | | | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Initial Bse: | 5 | 5 | 5 | 93 | 5 | 393 | 333 | 484 | 5 | 5 | 378 | 101 | | | | | | | | | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 33 | 33 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Initial Fut: | 5 | 5 | 5 | 93 | 5 | 426 | 366 | 484 | 5 | 5 | 378 | 101 | | | | | | | | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | | | | | | | | | |
| PHF Volume: | 5 | 5 | 5 | 101 | 5 | 463 | 398 | 526 | 5 | 5 | 411 | 110 | | | | | | | | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| Reduced Vol: | 5 | 5 | 5 | 101 | 5 | 463 | 398 | 526 | 5 | 5 | 411 | 110 | | | | | | | | | | | | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| FinalVolume: | 5 | 5 | 5 | 101 | 5 | 463 | 398 | 526 | 5 | 5 | 411 | 110 | | | | | | | | | | | | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Lanes: | 0.34 | 0.33 | 0.33 | 0.18 | 0.01 | 0.81 | 0.43 | 0.56 | 0.01 | 0.01 | 0.78 | 0.21 | | | | | | | | | | | | |
| Final Sat.: | 134 | 134 | 134 | 99 | 5 | 451 | 220 | 290 | 3 | 5 | 413 | 110 | | | | | | | | | | | | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 1.03 | 1.03 | 1.03 | 1.81 | 1.81 | 1.81 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | | | | | | | | | | | | | |
| Delay/Veh: | 12.4 | 12.4 | 12.4 | 70.4 | 70.4 | 70.4 | 390.5 | 391 | 390.5 | 64.3 | 64.3 | 64.3 | | | | | | | | | | | | |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | | | | | | | |
| AdjDel/Veh: | 12.4 | 12.4 | 12.4 | 70.4 | 70.4 | 70.4 | 390.5 | 391 | 390.5 | 64.3 | 64.3 | 64.3 | | | | | | | | | | | | |
| LOS by Move: | B | B | B | F | F | F | F | F | F | F | F | F | | | | | | | | | | | | |
| ApproachDel: | 12.4 | | | 70.4 | | | 390.5 | | | 64.3 | | | | | | | | | | | | | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | | | | | | | | | | | | | |
| ApprAdjDel: | 12.4 | | | 70.4 | | | 390.5 | | | 64.3 | | | | | | | | | | | | | | |
| LOS by Appr: | B | | | F | | | F | | | F | | | | | | | | | | | | | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 9.4 | 9.4 | 9.4 | 54.2 | 54.2 | 54.2 | 8.0 | 8.0 | 8.0 | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 563 | 883 | 527 | 139 | 340 | 525 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 605 | 949 | 567 | 149 | 366 | 565 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1931 | 648 | 930 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1931 | 648 | 930 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 0 | 24 | | | |
| cM capacity (veh/h) | 18 | 474 | 744 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 605 | 949 | 716 | 930 |
| Volume Left | 605 | 0 | 567 | 0 |
| Volume Right | 0 | 949 | 0 | 565 |
| cSH | 18 | 474 | 744 | 1700 |
| Volume to Capacity | 34.52 | 2.00 | 0.76 | 0.55 |
| Queue Length 95th (ft) | Err | 1623 | 181 | 0 |
| Control Delay (s) | Err | 478.6 | 22.8 | 0.0 |
| Lane LOS | F | F | C | |
| Approach Delay (s) | 4185.4 | | 22.8 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2038.0 | | |
| Intersection Capacity Utilization | 127.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 475 | 1455 | 733 | 792 | 1624 | 723 | 442 | 320 | 739 | 624 | 549 | 587 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.90 | | 1.00 | 0.99 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 4854 | | 3502 | 3194 | | 1805 | 1775 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 4854 | | 3502 | 3194 | | 1805 | 1775 | 1513 |
| 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) | 516 | 1582 | 797 | 861 | 1765 | 786 | 480 | 348 | 803 | 678 | 597 | 638 |
| RTOR Reduction (vph) | 0 | 0 | 316 | 0 | 67 | 0 | 0 | 84 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 516 | 1582 | 481 | 861 | 2484 | 0 | 480 | 1067 | 0 | 678 | 661 | 574 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1496 | | 1079 | 984 | | 255 | 251 | 296 |
| v/s Ratio Prot | 0.15 | 0.45 | | c0.48 | c0.51 | | 0.14 | c0.33 | | c0.38 | 0.37 | 0.10 |
| v/s Ratio Perm | | | 0.30 | | | | | | | | | 0.27 |
| v/c Ratio | 2.73 | 1.53 | 1.04 | 6.78 | 1.66 | | 0.44 | 1.39dr | | 2.66 | 2.63 | 1.94 |
| Uniform Delay, d1 | 56.8 | 42.5 | 42.5 | 55.8 | 41.5 | | 33.3 | 41.5 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 793.3 | 244.7 | 53.0 | 2617.3 | 300.2 | | 1.3 | 54.2 | | 757.6 | 746.4 | 434.8 |
| Delay (s) | 850.1 | 287.2 | 95.5 | 2673.1 | 341.7 | | 34.6 | 95.7 | | 809.1 | 797.9 | 483.1 |
| Level of Service | F | F | F | F | F | | C | F | | F | F | F |
| Approach Delay (s) | | 334.8 | | | 930.0 | | | 77.7 | | | 707.4 | |
| Approach LOS | | F | | | F | | | E | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 570.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.09 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 170.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 2724 | 171 | 0 | 2260 | 0 | 110 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2961 | 186 | 0 | 2457 | 0 | 120 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.57 | | 0.57 | 0.57 |
| vC, conflicting volume | | | 3147 | | 3575 | 987 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 2123 | | 2875 | 0 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 81 |
| cM capacity (veh/h) | | | 148 | | 8 | 621 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | EB 4 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|---|---|
| Volume Total | 987 | 987 | 987 | 186 | 614 | 614 | 614 | 614 | 120 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 186 | 0 | 0 | 0 | 0 | 120 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 621 |
| Volume to Capacity | 0.58 | 0.58 | 0.58 | 0.11 | 0.36 | 0.36 | 0.36 | 0.36 | 0.19 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.2 |
| Lane LOS | | | | | | | | | B |
| Approach Delay (s) | 0.0 | | | | 0.0 | | | | 12.2 |
| Approach LOS | | | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 66.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 508 | 1643 | 383 | 408 | 1213 | 486 | 478 | 444 | 508 | 425 | 525 | 550 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.98 | 1.00 |
| Satd. Flow (prot) | 3502 | 3413 | | 1805 | 3505 | 1586 | 1805 | 1732 | | | 1858 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.12 | 1.00 |
| Satd. Flow (perm) | 3502 | 3413 | | 1805 | 3505 | 1586 | 308 | 1732 | | | 223 | 1586 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 529 | 1711 | 399 | 425 | 1264 | 506 | 498 | 462 | 529 | 443 | 547 | 573 |
| RTOR Reduction (vph) | 0 | 16 | 0 | 0 | 0 | 68 | 0 | 39 | 0 | 0 | 0 | 183 |
| Lane Group Flow (vph) | 529 | 2094 | 0 | 425 | 1264 | 438 | 498 | 952 | 0 | 0 | 990 | 390 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 19.2 | 54.0 | | 10.4 | 45.2 | 45.2 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 19.2 | 54.0 | | 10.4 | 45.2 | 45.2 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.18 | 0.51 | | 0.10 | 0.43 | 0.43 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 640 | 1755 | | 178 | 1508 | 682 | 72 | 407 | | | 52 | 373 |
| v/s Ratio Prot | 0.15 | c0.61 | | c0.24 | 0.36 | | | 0.55 | | | | |
| v/s Ratio Perm | | | | | | 0.28 | 1.62 | | | | c4.45 | 0.25 |
| v/c Ratio | 0.83 | 1.19 | | 2.39 | 0.84 | 0.64 | 6.92 | 2.34 | | | 19.04 | 1.05 |
| Uniform Delay, d1 | 41.3 | 25.5 | | 47.3 | 26.6 | 23.5 | 40.1 | 40.1 | | | 40.1 | 40.1 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.6 | 93.0 | | 641.4 | 5.7 | 4.6 | 2691.4 | 610.2 | | | 8153.7 | 59.2 |
| Delay (s) | 49.9 | 118.5 | | 688.7 | 32.4 | 28.2 | 2731.6 | 650.4 | | | 8193.8 | 99.3 |
| Level of Service | D | F | | F | C | C | F | F | | | F | F |
| Approach Delay (s) | | 104.7 | | | 158.5 | | | 1346.4 | | | 5226.4 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 1369.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 6.23 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 203.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 1430 | 1201 | 115 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1554 | 1305 | 125 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | TWLTL | |
| Median storage veh) | | | | 2 | 2 | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2145 | 715 | 1430 | | | |
| vC1, stage 1 conf vol | 1368 | | | | | |
| vC2, stage 2 conf vol | 777 | | | | | |
| vCu, unblocked vol | 2145 | 715 | 1430 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | 5.8 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 182 | 378 | 481 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|
| Volume Total | 0 | 777 | 777 | 870 | 560 |
| Volume Left | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 0 | 125 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.46 | 0.46 | 0.51 | 0.33 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | | | |
| Approach Delay (s) | 0.0 | 0.0 | | 0.0 | |
| Approach LOS | A | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 42.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 297 | 4 | 4 | 1133 | 1084 | 117 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | | 1.00 | 0.95 | 0.95 | |
| Frpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | | 1.00 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1807 | | 1805 | 3610 | 3548 | |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1807 | | 1805 | 3610 | 3548 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 323 | 4 | 4 | 1232 | 1178 | 127 |
| RTOR Reduction (vph) | 1 | 0 | 0 | 0 | 8 | 0 |
| Lane Group Flow (vph) | 326 | 0 | 4 | 1232 | 1297 | 0 |
| Confl. Peds. (#/hr) | | 5 | | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 19.2 | | 0.8 | 46.8 | 41.5 | |
| Effective Green, g (s) | 19.2 | | 0.8 | 46.8 | 41.5 | |
| Actuated g/C Ratio | 0.26 | | 0.01 | 0.62 | 0.55 | |
| Clearance Time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 462 | | 19 | 2252 | 1963 | |
| v/s Ratio Prot | c0.18 | | 0.00 | c0.34 | c0.37 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.71 | | 0.21 | 0.55 | 0.66 | |
| Uniform Delay, d1 | 25.3 | | 36.8 | 8.0 | 11.8 | |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.9 | | 5.5 | 1.0 | 1.8 | |
| Delay (s) | 30.2 | | 42.3 | 9.0 | 13.6 | |
| Level of Service | C | | D | A | B | |
| Approach Delay (s) | 30.2 | | | 9.1 | 13.6 | |
| Approach LOS | C | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 58.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 475 | 83 | 45 | 29 | 107 | 208 | 45 | 642 | 49 | 260 | 368 | 560 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 516 | 90 | 49 | 32 | 116 | 226 | 49 | 698 | 53 | 283 | 400 | 609 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 655 | 374 | 800 | 1291 |
| Volume Left (vph) | 516 | 32 | 49 | 283 |
| Volume Right (vph) | 49 | 226 | 53 | 609 |
| Hadj (s) | 0.11 | -0.35 | -0.03 | -0.24 |
| Departure Headway (s) | 9.6 | 9.2 | 9.4 | 9.2 |
| Degree Utilization, x | 1.0 | 0.96 | 1.0 | 1.0 |
| Capacity (veh/h) | 381 | 386 | 388 | 394 |
| Control Delay (s) | 367.8 | 66.4 | 522.8 | 1063.4 |
| Approach Delay (s) | 367.8 | 66.4 | 522.8 | 1063.4 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 659.3 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 174.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.440
Loss Time (sec): 12 Average Delay (sec/veh): 219.9
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 63 | 39 | 26 | 188 | 33 | 484 | 516 | 3046 | 70 | 18 | 2391 | 158 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 63 | 39 | 26 | 188 | 33 | 484 | 516 | 3046 | 70 | 18 | 2391 | 158 |
| Added Vol: | 4 | 0 | 0 | 0 | 0 | 8 | 8 | 54 | 4 | 0 | 54 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 67 | 39 | 26 | 188 | 33 | 492 | 524 | 3100 | 74 | 18 | 2445 | 158 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 68 | 40 | 26 | 191 | 34 | 501 | 534 | 3157 | 75 | 18 | 2490 | 161 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 68 | 40 | 26 | 191 | 34 | 501 | 534 | 3157 | 75 | 18 | 2490 | 161 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 68 | 40 | 26 | 191 | 34 | 501 | 534 | 3157 | 75 | 18 | 2490 | 161 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.53 | 0.53 | 0.53 | 0.64 | 0.64 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.51 | 0.29 | 0.20 | 0.85 | 0.15 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 508 | 295 | 197 | 1030 | 181 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.13 | 0.19 | 0.19 | 0.31 | 0.30 | 0.87 | 0.05 | 0.01 | 0.69 | 0.10 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.21 | 0.60 | 0.60 | 0.08 | 0.48 | 0.48 |
| Volume/Cap: | 0.62 | 0.62 | 0.62 | 0.86 | 0.86 | 1.44 | 1.44 | 1.45 | 0.08 | 0.12 | 1.44 | 0.21 |
| Delay/Veh: | 48.3 | 48.3 | 48.3 | 69.7 | 69.7 | 260.5 | 260.3 | 231 | 10.0 | 51.3 | 232 | 18.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.3 | 48.3 | 48.3 | 69.7 | 69.7 | 260.5 | 260.3 | 231 | 10.0 | 51.3 | 232 | 18.2 |
| LOS by Move: | D | D | D | E | E | F | F | F | B | D | F | B |
| HCM2kAvgQ: | 6 | 6 | 6 | 11 | 11 | 39 | 41 | 123 | 1 | 1 | 97 | 3 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.282
Loss Time (sec): 12 Average Delay (sec/veh): 112.1
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Split Phase | | | | Split Phase | | | | Permitted | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 33 | 0 | 33 | | 0 | 0 | 0 | | 0 | 32 | 32 | | 10 | 10 | 0 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 1 | 0 | 0 | 0 1 | 0 | 0 | 0 | 0 0 | 0 | 0 | 3 | 0 1 | 1 | 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 454 | 0 | 570 | | 0 | 0 | 0 | | 0 | 2741 | 640 | | 438 | 1908 | 0 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 454 | 0 | 570 | | 0 | 0 | 0 | | 0 | 2741 | 640 | | 438 | 1908 | 0 | |
| Added Vol: | 12 | 0 | 0 | | 0 | 0 | 0 | | 0 | 42 | 13 | | 0 | 41 | 0 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 466 | 0 | 570 | | 0 | 0 | 0 | | 0 | 2783 | 653 | | 438 | 1949 | 0 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.98 | 0.98 | 0.98 | | 0.98 | 0.98 | 0.98 | | 0.98 | 0.98 | 0.98 | | 0.98 | 0.98 | 0.98 | |
| PHF Volume: | 475 | 0 | 581 | | 0 | 0 | 0 | | 0 | 2837 | 666 | | 446 | 1987 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 475 | 0 | 581 | | 0 | 0 | 0 | | 0 | 2837 | 666 | | 446 | 1987 | 0 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 475 | 0 | 581 | | 0 | 0 | 0 | | 0 | 2837 | 666 | | 446 | 1987 | 0 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | |
| Adjustment: | 0.95 | 1.00 | 0.85 | | 1.00 | 1.00 | 1.00 | | 1.00 | 0.91 | 0.85 | | 0.95 | 0.95 | 1.00 | |
| Lanes: | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 3.00 | 1.00 | | 1.00 | 2.00 | 0.00 | |
| Final Sat.: | 1805 | 0 | 1615 | | 0 | 0 | 0 | | 0 | 5187 | 1615 | | 1805 | 3610 | 0 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.26 | 0.00 | 0.36 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.55 | 0.41 | | 0.25 | 0.55 | 0.00 | |
| Crit Moves: | | | **** | | | | | | | **** | | | **** | | | |
| Green/Cycle: | 0.28 | 0.00 | 0.28 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.43 | 0.43 | | 0.19 | 0.62 | 0.00 | |
| Volume/Cap: | 0.94 | 0.00 | 1.28 | | 0.00 | 0.00 | 0.00 | | 0.00 | 1.28 | 0.97 | | 1.28 | 0.89 | 0.00 | |
| Delay/Veh: | 67.5 | 0.0 | 186.2 | | 0.0 | 0.0 | 0.0 | | 0.0 | 165 | 59.7 | | 195.7 | 24.1 | 0.0 | |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 67.5 | 0.0 | 186.2 | | 0.0 | 0.0 | 0.0 | | 0.0 | 165 | 59.7 | | 195.7 | 24.1 | 0.0 | |
| LOS by Move: | E | A | F | | A | A | A | | A | F | E | | F | C | A | |
| HCM2kAvgQ: | 21 | 0 | 39 | | 0 | 0 | 0 | | 0 | 67 | 29 | | 31 | 35 | 0 | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 3.524
Loss Time (sec): 12 Average Delay (sec/veh): 553.6
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 1 | 0 | 1 0 | 0 0 | 1! 0 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 301 | 745 | 272 | 475 | 994 | 273 | 358 | 2493 | 429 | 356 | 1888 | 544 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 301 | 745 | 272 | 475 | 994 | 273 | 358 | 2493 | 429 | 356 | 1888 | 544 |
| Added Vol: | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 8 | 0 | 29 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 309 | 745 | 272 | 475 | 994 | 273 | 358 | 2522 | 437 | 356 | 1917 | 544 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 323 | 779 | 285 | 497 | 1040 | 286 | 374 | 2638 | 457 | 372 | 2005 | 569 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 323 | 779 | 285 | 497 | 1040 | 286 | 374 | 2638 | 457 | 372 | 2005 | 569 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 323 | 779 | 285 | 497 | 1040 | 286 | 374 | 2638 | 457 | 372 | 2005 | 569 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 0.91 | 0.91 | 0.97 | 0.97 | 0.97 | 0.50 | 0.50 | 0.85 | 0.95 | 0.92 | 0.92 |
| Lanes: | 1.00 | 1.47 | 0.53 | 0.27 | 0.57 | 0.16 | 0.25 | 1.75 | 1.00 | 1.00 | 1.56 | 0.44 |
| Final Sat.: | 1728 | 2532 | 924 | 501 | 1048 | 288 | 235 | 1653 | 1615 | 1805 | 2719 | 772 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.31 | 0.31 | 0.99 | 0.99 | 0.99 | 1.60 | 1.60 | 0.28 | 0.21 | 0.74 | 0.74 |
| Crit Moves: | **** | | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.54 | 0.89 | 0.89 | xxxx | xxxx | xxxx | 4.29 | 4.29 | 0.76 | 1.61 | 1.47 | 1.47 |
| Delay/Veh: | 20.7 | 30.8 | 30.8 | 0.0 | 0.0 | 0.0 | 1509 | 1509 | 27.1 | 327.4 | 236 | 236.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 20.7 | 30.8 | 30.8 | 0.0 | 0.0 | 0.0 | 1509 | 1509 | 27.1 | 327.4 | 236 | 236.3 |
| LOS by Move: | C | C | C | A | A | A | F | F | C | F | F | F |
| HCM2kAvgQ: | 7 | 17 | 17 | 39 | 39 | 39 | 188 | 188 | 11 | 28 | 87 | 87 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.554
Loss Time (sec): 12 Average Delay (sec/veh): 221.2
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 251 | 32 | 375 | 51 | 25 | 199 | 32 | 2713 | 337 | 392 | 2148 | 190 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 251 | 32 | 375 | 51 | 25 | 199 | 32 | 2713 | 337 | 392 | 2148 | 190 |
| Added Vol: | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 8 | 0 | 12 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 259 | 32 | 375 | 51 | 25 | 199 | 32 | 2726 | 345 | 392 | 2160 | 190 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 282 | 35 | 408 | 55 | 27 | 216 | 35 | 2963 | 375 | 426 | 2348 | 207 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 282 | 35 | 408 | 55 | 27 | 216 | 35 | 2963 | 375 | 426 | 2348 | 207 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 282 | 35 | 408 | 55 | 27 | 216 | 35 | 2963 | 375 | 426 | 2348 | 207 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.43 | 0.86 | 0.86 | 0.15 | 0.87 | 0.87 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.08 | 0.92 | 1.00 | 0.11 | 0.89 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 825 | 129 | 1509 | 281 | 184 | 1463 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.34 | 0.27 | 0.27 | 0.20 | 0.15 | 0.15 | 0.02 | 0.82 | 0.23 | 0.24 | 0.65 | 0.13 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.08 | 0.48 | 0.48 | 0.14 | 0.53 | 0.53 |
| Volume/Cap: | 1.20 | 0.95 | 0.95 | 0.70 | 0.52 | 0.52 | 0.23 | 1.71 | 0.48 | 1.71 | 1.22 | 0.24 |
| Delay/Veh: | 168.5 | 72.3 | 72.3 | 61.9 | 37.2 | 37.2 | 52.2 | 355 | 21.7 | 389.5 | 132 | 15.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 168.5 | 72.3 | 72.3 | 61.9 | 37.2 | 37.2 | 52.2 | 355 | 21.7 | 389.5 | 132 | 15.1 |
| LOS by Move: | F | E | E | E | D | D | D | F | C | F | F | B |
| HCM2kAvgQ: | 19 | 21 | 21 | 3 | 8 | 8 | 1 | 136 | 9 | 39 | 74 | 4 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lakeshore Drive / Riverside Drive (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 1.829 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 314.0 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 10 | 33 | 33 | 10 | 33 | 33 | 10 | 31 | 31 | 10 | 31 | 31 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 295 | 426 | 98 | 547 | 475 | 448 | 402 | 1091 | 301 | 88 | 1600 | 473 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 295 | 426 | 98 | 547 | 475 | 448 | 402 | 1091 | 301 | 88 | 1600 | 473 |
| Added Vol: | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 18 | 0 | 18 | 18 | 18 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 295 | 426 | 116 | 565 | 475 | 448 | 402 | 1109 | 301 | 106 | 1618 | 491 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 303 | 438 | 119 | 581 | 488 | 460 | 413 | 1140 | 309 | 109 | 1663 | 505 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 303 | 438 | 119 | 581 | 488 | 460 | 413 | 1140 | 309 | 109 | 1663 | 505 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 303 | 438 | 119 | 581 | 488 | 460 | 413 | 1140 | 309 | 109 | 1663 | 505 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 1.57 | 0.43 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2747 | 748 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.17 | 0.16 | 0.16 | 0.32 | 0.14 | 0.29 | 0.23 | 0.32 | 0.19 | 0.06 | 0.88 | 0.31 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.15 | 0.28 | 0.28 | 0.13 | 0.26 | 0.26 | 0.09 | 0.36 | 0.36 | 0.10 | 0.36 | 0.36 |
| Volume/Cap: | 1.11 | 0.58 | 0.58 | 2.41 | 0.53 | 1.11 | 2.41 | 0.87 | 0.53 | 0.63 | 2.41 | 0.86 |
| Delay/Veh: | 137.8 | 38.4 | 38.4 | 698.9 | 38.9 | 121.7 | 706.2 | 42.3 | 31.1 | 59.5 | 677 | 47.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 137.8 | 38.4 | 38.4 | 698.9 | 38.9 | 121.7 | 706.2 | 42.3 | 31.1 | 59.5 | 677 | 47.7 |
| LOS by Move: | F | D | D | F | D | F | F | D | C | E | F | D |
| HCM2kAvgQ: | 18 | 10 | 10 | 63 | 8 | 26 | 46 | 23 | 9 | 5 | 179 | 20 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 W. Graham Avenue / N. Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.401 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 136.5 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! | 0 0 | | 1 0 0 | 1 0 | | 0 0 1! | 0 0 | | 0 0 1! | 0 0 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 38 | 12 | 176 | 25 | 167 | 243 | 452 | 40 | 23 | 500 | 113 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 38 | 12 | 176 | 25 | 167 | 243 | 452 | 40 | 23 | 500 | 113 |
| Added Vol: | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 24 | 0 | 0 | 24 | 12 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 17 | 38 | 12 | 188 | 25 | 167 | 243 | 476 | 40 | 23 | 524 | 125 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| PHF Volume: | 17 | 39 | 12 | 192 | 26 | 171 | 248 | 487 | 41 | 24 | 536 | 128 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 17 | 39 | 12 | 192 | 26 | 171 | 248 | 487 | 41 | 24 | 536 | 128 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 17 | 39 | 12 | 192 | 26 | 171 | 248 | 487 | 41 | 24 | 536 | 128 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.25 | 0.57 | 0.18 | 1.00 | 0.13 | 0.87 | 0.32 | 0.63 | 0.05 | 0.03 | 0.78 | 0.19 |
| Final Sat.: | 106 | 238 | 75 | 436 | 66 | 438 | 177 | 347 | 29 | 19 | 441 | 105 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | 0.16 | 0.44 | 0.39 | 0.39 | 1.40 | 1.40 | 1.40 | 1.21 | 1.21 | 1.21 |
| Crit Moves: | **** | | | **** | | | | **** | | | **** | |
| Delay/Veh: | 13.0 | 13.0 | 13.0 | 17.2 | 14.3 | 14.3 | 210.3 | 210 | 210.3 | 133.7 | 134 | 133.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 13.0 | 13.0 | 13.0 | 17.2 | 14.3 | 14.3 | 210.3 | 210 | 210.3 | 133.7 | 134 | 133.7 |
| LOS by Move: | B | B | B | C | B | B | F | F | F | F | F | F |
| ApproachDel: | 13.0 | | | 15.7 | | | 210.3 | | | 133.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 13.0 | | | 15.7 | | | 210.3 | | | 133.7 | | |
| LOS by Appr: | B | | | C | | | F | | | F | | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.2 | 0.8 | 0.6 | 0.6 | 30.9 | 30.9 | 30.9 | 19.5 | 19.5 | 19.5 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 554 | 1225 | 74 | 872 | 1058 | 457 | 245 | 939 | 981 | 775 | 639 | 422 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.95 | | 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) | 1805 | 5138 | | 3433 | 3430 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1805 | 5138 | | 3433 | 3430 | | 1805 | 3610 | 1528 | 1805 | 3610 | 1589 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 583 | 1289 | 78 | 918 | 1114 | 481 | 258 | 988 | 1033 | 816 | 673 | 444 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 583 | 1361 | 0 | 918 | 1553 | 0 | 258 | 988 | 1033 | 816 | 673 | 350 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | 8 | | | 4 |
| Actuated Green, G (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 16.4 | 43.0 | 43.0 | 5.0 | 31.6 | 31.6 |
| Effective Green, g (s) | 5.3 | 40.5 | | 5.5 | 40.7 | | 16.4 | 43.0 | 43.0 | 5.0 | 31.6 | 31.6 |
| Actuated g/C Ratio | 0.05 | 0.35 | | 0.05 | 0.35 | | 0.14 | 0.37 | 0.37 | 0.04 | 0.27 | 0.27 |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 83 | 1809 | | 164 | 1213 | | 257 | 1349 | 571 | 78 | 991 | 436 |
| v/s Ratio Prot | c0.32 | 0.26 | | 0.27 | c0.45 | | 0.14 | 0.27 | | c0.45 | 0.19 | |
| v/s Ratio Perm | | | | | | | | | c0.68 | | | 0.22 |
| v/c Ratio | 7.02 | 0.75 | | 5.60 | 1.28 | | 1.00 | 0.73 | 1.81 | 10.46 | 0.68 | 0.80 |
| Uniform Delay, d1 | 54.9 | 32.8 | | 54.8 | 37.1 | | 49.3 | 31.0 | 36.0 | 55.0 | 37.2 | 38.8 |
| Progression Factor | 1.00 | 1.00 | | 0.88 | 0.68 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2735.9 | 2.9 | | 2070.1 | 126.7 | | 57.1 | 1.8 | 371.0 | 4283.1 | 1.5 | 9.7 |
| Delay (s) | 2790.7 | 35.8 | | 2118.4 | 152.0 | | 106.4 | 32.8 | 407.0 | 4338.1 | 38.6 | 48.6 |
| Level of Service | F | D | | F | F | | F | C | F | F | D | D |
| Approach Delay (s) | | 859.4 | | | 870.3 | | | 210.8 | | | 1855.9 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 914.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 2.33 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 21.0 |
| Intersection Capacity Utilization | 162.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gunnerson Street / Riverside Drive (SR-74)

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 105 | | 5 | | 71 | | 25 | | 5 | | 67 | | 131 | 1327 | | 171 | | | 26 | 1882 | | | 27 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | |
| Initial Bse: | 105 | | 5 | | 71 | | 25 | | 5 | | 67 | | 131 | 1327 | | 171 | | | 26 | 1882 | | | 27 | |
| Added Vol: | 0 | | 0 | | 18 | | 18 | | 0 | | 0 | | 0 | 60 | | 0 | | | 18 | 60 | | | 18 | |
| PasserByVol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | | 0 | |
| Initial Fut: | 105 | | 5 | | 89 | | 43 | | 5 | | 67 | | 131 | 1387 | | 171 | | | 44 | 1942 | | | 45 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | |
| PHF Volume: | 114 | | 5 | | 97 | | 47 | | 5 | | 73 | | 142 | 1506 | | 186 | | | 48 | 2109 | | | 49 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | | 0 | |
| FinalVolume: | 114 | | 5 | | 97 | | 47 | | 5 | | 73 | | 142 | 1506 | | 186 | | | 48 | 2109 | | | 49 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 7.1 | 6.5 | | 6.2 | | 7.1 | 6.5 | | 6.2 | | | | 4.1 | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | |
| FollowUpTim: | 3.5 | 4.0 | | 3.3 | | 3.5 | 4.0 | | 3.3 | | | | 2.2 | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 4151 | 4136 | | 1599 | | 4163 | 4205 | | 2133 | | | | 2157 | xxxx | xxxxx | | | | 1692 | xxxx | xxxxx | | | |
| Potent Cap.: | 1 | | 2 | | 132 | | 1 | | 2 | | 63 | | 252 | xxxx | xxxxx | | | | 382 | xxxx | xxxxx | | | |
| Move Cap.: | 0 | | 1 | | 132 | | 0 | | 1 | | 63 | | 252 | xxxx | xxxxx | | | | 382 | xxxx | xxxxx | | | |
| Volume/Cap: | xxxx | 6.73 | | 0.73 | | xxxx | 7.49 | | 1.15 | | | | 0.56 | xxxx | xxxx | | | | 0.12 | xxxx | xxxx | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | 4.2 | | xxxx | xxxx | | 5.9 | | | | 3.2 | xxxx | xxxxx | | | | 0.4 | xxxx | xxxxx | | | |
| Control Del: | xxxxx | xxxx | | 83.7 | | xxxxx | xxxx | | 272.1 | | | | 36.2 | xxxx | xxxxx | | | | 15.8 | xxxx | xxxxx | | | |
| LOS by Move: | * | * | | F | | * | * | | F | | | | E | * | * | | | | C | * | * | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | 0 | xxxx | xxxxx | | | | 0 | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | * | | * | | * | * | | * | | | | * | * | | * | | | * | * | | | | |
| ApproachDel: | +Inf | | | | | | +Inf | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | F | | | | | | F | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Collier Avenue / Riverside Drive (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 4.635
Loss Time (sec): 12 Average Delay (sec/veh): 1158.3
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ovl | | | Include | | |
| Min. Green: | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 1115 | 881 | 222 | 372 | 688 | 289 | 175 | 675 | 917 | 410 | 863 | 343 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 1115 | 881 | 222 | 372 | 688 | 289 | 175 | 675 | 917 | 410 | 863 | 343 |
| Added Vol: | 96 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 96 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 1211 | 899 | 222 | 372 | 706 | 289 | 175 | 675 | 1013 | 410 | 863 | 343 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 1312 | 974 | 241 | 403 | 765 | 313 | 190 | 731 | 1098 | 444 | 935 | 372 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 1312 | 974 | 241 | 403 | 765 | 313 | 190 | 731 | 1098 | 444 | 935 | 372 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 1312 | 974 | 241 | 403 | 765 | 313 | 190 | 731 | 1098 | 444 | 935 | 372 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 0.85 | 0.50 | 0.50 | 0.85 | 0.30 | 0.30 | 0.30 |
| Lanes: | 1.00 | 0.80 | 0.20 | 1.00 | 1.00 | 1.00 | 0.21 | 0.79 | 1.00 | 0.25 | 0.54 | 0.21 |
| Final Sat.: | 1805 | 1478 | 365 | 1805 | 1900 | 1615 | 195 | 753 | 1615 | 146 | 307 | 122 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.73 | 0.66 | 0.66 | 0.22 | 0.40 | 0.19 | 0.97 | 0.97 | 0.68 | 3.04 | 3.04 | 3.04 |
| Crit Moves: | **** | | | | **** | | | | | | **** | |
| Green/Cycle: | 0.16 | 0.16 | 0.16 | 0.09 | 0.09 | 0.09 | 0.66 | 0.66 | 0.81 | 0.66 | 0.66 | 0.66 |
| Volume/Cap: | 4.63 | 4.20 | 4.20 | 2.57 | 4.63 | 2.23 | 1.48 | 1.48 | 0.84 | 4.63 | 4.63 | 4.63 |
| Delay/Veh: | 1694 | 1499 | 1499 | 779.9 | 1704 | 631.5 | 245.2 | 245 | 11.4 | 1662 | 1662 | 1662 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 1694 | 1499 | 1499 | 779.9 | 1704 | 631.5 | 245.2 | 245 | 11.4 | 1662 | 1662 | 1662 |
| LOS by Move: | F | F | F | F | F | F | F | F | B | F | F | F |
| HCM2kAvgQ: | 174 | 157 | 157 | 46 | 102 | 34 | 71 | 71 | 26 | 231 | 231 | 231 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 405 | 1104 | 237 | 328 | 1038 | 1147 | 179 | 510 | 177 | 1257 | 480 | 148 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 0.97 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 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 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3313 | | 3303 | 1792 | 2797 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3313 | | 3303 | 1792 | 2797 | 1805 | 1900 | 1495 | 3502 | 3610 | 1586 |
| 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) | 440 | 1200 | 258 | 357 | 1128 | 1247 | 195 | 554 | 192 | 1366 | 522 | 161 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 0 | 24 | 0 | 0 | 77 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 440 | 1444 | 0 | 357 | 1128 | 1223 | 195 | 554 | 115 | 1366 | 522 | 41 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 7% | 0% | 6% | 6% | 0% | 0% | 0% | 8% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.4 | 38.5 | | 17.3 | 44.7 | 75.1 | 14.8 | 14.7 | 32.0 | 30.4 | 30.3 | 30.3 |
| Effective Green, g (s) | 10.4 | 38.5 | | 17.3 | 44.7 | 75.1 | 14.8 | 14.7 | 32.0 | 30.4 | 30.3 | 30.3 |
| Actuated g/C Ratio | 0.09 | 0.32 | | 0.14 | 0.37 | 0.63 | 0.12 | 0.12 | 0.27 | 0.25 | 0.25 | 0.25 |
| Clearance Time (s) | 4.6 | 4.6 | | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 4.6 | 4.6 | 5.3 | 5.3 |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 303 | 1062 | | 476 | 667 | 1750 | 222 | 232 | 398 | 887 | 911 | 400 |
| v/s Ratio Prot | c0.13 | 0.44 | | 0.11 | c0.63 | 0.18 | 0.11 | c0.29 | 0.04 | c0.39 | 0.14 | |
| v/s Ratio Perm | | | | | | 0.26 | | | 0.04 | | | 0.03 |
| v/c Ratio | 1.45 | 1.36 | | 0.75 | 1.69 | 0.70 | 0.88 | 2.39 | 0.29 | 1.54 | 0.57 | 0.10 |
| Uniform Delay, d1 | 54.8 | 40.8 | | 49.3 | 37.6 | 14.9 | 51.7 | 52.6 | 35.0 | 44.8 | 39.2 | 34.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 221.0 | 168.2 | | 5.8 | 317.5 | 1.0 | 29.2 | 637.6 | 0.1 | 248.7 | 2.6 | 0.5 |
| Delay (s) | 275.8 | 209.0 | | 55.1 | 355.1 | 15.9 | 81.0 | 690.3 | 35.1 | 293.5 | 41.8 | 34.9 |
| Level of Service | F | F | | E | F | B | F | F | D | F | D | C |
| Approach Delay (s) | | 224.5 | | | 161.1 | | | 430.3 | | | 209.0 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 223.0 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.72 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 19.8 |
| Intersection Capacity Utilization | 145.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 908 | 1203 | 869 | 692 | 1588 | 248 | 222 | 478 | 570 | 573 | 462 | 577 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.98 | | 1.00 | 0.92 | | 1.00 | 0.92 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 4769 | | 3502 | 3468 | | 1804 | 3286 | | 1804 | 3279 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.10 | 1.00 | | 0.09 | 1.00 | |
| Satd. Flow (perm) | 1805 | 4769 | | 3502 | 3468 | | 183 | 3286 | | 177 | 3279 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 946 | 1253 | 905 | 721 | 1654 | 258 | 231 | 498 | 594 | 597 | 481 | 601 |
| RTOR Reduction (vph) | 0 | 99 | 0 | 0 | 11 | 0 | 0 | 131 | 0 | 0 | 106 | 0 |
| Lane Group Flow (vph) | 946 | 2059 | 0 | 721 | 1901 | 0 | 231 | 961 | 0 | 597 | 976 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | 5 | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | 8 | | | 4 | | |
| Actuated Green, G (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Effective Green, g (s) | 7.5 | 45.0 | | 10.5 | 48.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Actuated g/C Ratio | 0.07 | 0.39 | | 0.09 | 0.42 | | 0.37 | 0.37 | | 0.37 | 0.37 | |
| Clearance Time (s) | 4.5 | 6.0 | | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 117 | 1866 | | 319 | 1447 | | 68 | 1228 | | 66 | 1226 | |
| v/s Ratio Prot | c0.52 | 0.43 | | c0.21 | c0.55 | | | 0.29 | | | 0.30 | |
| v/s Ratio Perm | | | | | | | 1.26 | | | c3.38 | | |
| v/c Ratio | 8.09 | 1.25dr | | 2.26 | 1.31 | | 3.40 | 0.78 | | 9.05 | 0.85dr | |
| Uniform Delay, d1 | 53.8 | 35.0 | | 52.2 | 33.5 | | 36.0 | 31.9 | | 36.0 | 32.1 | |
| Progression Factor | 0.97 | 0.96 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3190.0 | 47.5 | | 577.0 | 146.2 | | 1115.0 | 3.1 | | 3650.9 | 3.4 | |
| Delay (s) | 3242.3 | 81.3 | | 629.3 | 179.7 | | 1151.0 | 34.9 | | 3686.9 | 35.5 | |
| Level of Service | F | F | | F | F | | F | C | | F | D | |
| Approach Delay (s) | | 1044.7 | | | 302.8 | | | 229.8 | | | 1333.8 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 753.4 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 5.28 | | |
| Actuated Cycle Length (s) | 115.0 | Sum of lost time (s) | 16.5 |
| Intersection Capacity Utilization | 184.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 1741 | 561 | 685 | 1359 | 0 | 0 | 0 | 0 | 747 | 0 | 740 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Hourly flow rate (vph) | 0 | 1852 | 597 | 729 | 1446 | 0 | 0 | 0 | 0 | 795 | 0 | 787 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total (vph) | 1852 | 597 | 729 | 1446 | 1582 |
| Volume Left (vph) | 0 | 0 | 729 | 0 | 795 |
| Volume Right (vph) | 0 | 597 | 0 | 0 | 787 |
| Hadj (s) | 0.07 | -0.58 | 0.50 | 0.00 | -0.11 |
| Departure Headway (s) | 7.2 | 3.2 | 8.1 | 7.6 | 6.9 |
| Degree Utilization, x | 1.0 | 0.53 | 1.0 | 1.0 | 1.0 |
| Capacity (veh/h) | 509 | 1117 | 450 | 479 | 528 |
| Control Delay (s) | 1225.7 | 9.8 | 315.5 | 940.9 | 928.9 |
| Approach Delay (s) | 929.4 | | 731.4 | | 928.9 |
| Approach LOS | F | | F | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 859.9 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 322.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1646 | 892 | 753 | 1983 | 0 | 0 | 0 | 0 | 666 | 0 | 731 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Lane Util. Factor | | 0.95 | 1.00 | 0.97 | 0.95 | | | | | 0.95 | 0.91 | 0.95 |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.99 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | 1.00 | 1.00 | | | | | 1.00 | 0.91 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1484 | 1490 |
| Flt Permitted | | 1.00 | 1.00 | 0.95 | 1.00 | | | | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | | 3539 | 1583 | 3433 | 3574 | | | | | 1681 | 1484 | 1490 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 0 | 1680 | 910 | 768 | 2023 | 0 | 0 | 0 | 0 | 680 | 0 | 746 |
| RTOR Reduction (vph) | 0 | 0 | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 |
| Lane Group Flow (vph) | 0 | 1680 | 603 | 768 | 2023 | 0 | 0 | 0 | 0 | 496 | 419 | 399 |
| Confl. Peds. (#/hr) | 892 | | | | | | | | | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 2% | 0% | 3% |
| Turn Type | | NA | Perm | Prot | NA | | | | | Split | NA | Prot |
| Protected Phases | | 2 | | 1 | 6 | | | | | 4 | 4 | 4 |
| Permitted Phases | | | 2 | | | | | | | | | |
| Actuated Green, G (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Effective Green, g (s) | | 44.3 | 44.3 | 25.4 | 74.3 | | | | | 24.7 | 24.7 | 24.7 |
| Actuated g/C Ratio | | 0.40 | 0.40 | 0.23 | 0.68 | | | | | 0.22 | 0.22 | 0.22 |
| Clearance Time (s) | | 5.7 | 5.7 | 4.6 | 5.7 | | | | | 5.3 | 5.3 | 5.3 |
| Vehicle Extension (s) | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | | 1425 | 637 | 792 | 2414 | | | | | 377 | 333 | 334 |
| v/s Ratio Prot | | c0.47 | | c0.22 | 0.57 | | | | | c0.30 | 0.28 | 0.27 |
| v/s Ratio Perm | | | 0.38 | | | | | | | | | |
| v/c Ratio | | 1.18 | 0.95 | 0.97 | 0.84 | | | | | 1.32 | 1.26 | 1.20 |
| Uniform Delay, d1 | | 32.9 | 31.7 | 41.9 | 13.3 | | | | | 42.6 | 42.6 | 42.6 |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 88.1 | 24.7 | 24.3 | 3.7 | | | | | 159.7 | 138.5 | 113.4 |
| Delay (s) | | 121.0 | 56.4 | 66.2 | 17.0 | | | | | 202.4 | 181.2 | 156.0 |
| Level of Service | | F | E | E | B | | | | | F | F | F |
| Approach Delay (s) | | 98.3 | | | 30.6 | | | 0.0 | | | 180.5 | |
| Approach LOS | | F | | | C | | | A | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 87.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.16 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 196.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 892 | 166 | 242 | 458 | 0 | 0 | 0 | 0 | 497 | 0 | 242 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 929 | 173 | 252 | 477 | 0 | 0 | 0 | 0 | 518 | 0 | 252 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 477 | | | 1102 | | | 2036 | 1910 | 929 | 1910 | 2083 | 477 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 477 | | | 1102 | | | 2036 | 1910 | 929 | 1910 | 2083 | 477 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 60 | | | 100 | 100 | 100 | 0 | 100 | 57 |
| cM capacity (veh/h) | 1096 | | | 626 | | | 17 | 41 | 327 | 36 | 32 | 586 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 929 | 173 | 252 | 477 | 770 |
| Volume Left | 0 | 0 | 252 | 0 | 518 |
| Volume Right | 0 | 173 | 0 | 0 | 252 |
| cSH | 1700 | 1700 | 626 | 1700 | 52 |
| Volume to Capacity | 0.55 | 0.10 | 0.40 | 0.28 | 14.86 |
| Queue Length 95th (ft) | 0 | 0 | 49 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 14.6 | 0.0 | Err |
| Lane LOS | | | B | | F |
| Approach Delay (s) | 0.0 | | 5.0 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2960.7 | | |
| Intersection Capacity Utilization | 122.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 817 | 1671 | 0 | 0 | 1650 | 413 | 394 | 0 | 311 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 834 | 1705 | 0 | 0 | 1684 | 421 | 402 | 0 | 317 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2105 | | | 1705 | | | 5267 | 5478 | 1705 | 5584 | 5267 | 1894 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2105 | | | 1705 | | | 5267 | 5478 | 1705 | 5584 | 5267 | 1894 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 265 | | | 378 | | | 0 | 0 | 114 | 0 | 0 | 88 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 834 | 1705 | 2105 | 719 |
| Volume Left | 834 | 0 | 0 | 402 |
| Volume Right | 0 | 0 | 421 | 317 |
| cSH | 265 | 1700 | 1700 | 0 |
| Volume to Capacity | 3.15 | 1.00 | 1.24 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 1006.3 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 330.5 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 322.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 431 | 1882 | 0 | 0 | 1859 | 1000 | 878 | 0 | 1030 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Lane Util. Factor | 1.00 | 0.91 | | | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | | | |
| Frpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 0.98 | 1.00 | 1.00 | 1.00 | | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Frt | 1.00 | 1.00 | | | 1.00 | 0.85 | 1.00 | 0.90 | 0.85 | | | |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (prot) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1496 | 1504 | | | |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | | | |
| Satd. Flow (perm) | 1805 | 5085 | | | 5136 | 1553 | 1665 | 1496 | 1504 | | | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 440 | 1920 | 0 | 0 | 1897 | 1020 | 896 | 0 | 1051 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 428 | 0 | 64 | 64 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 440 | 1920 | 0 | 0 | 1897 | 592 | 681 | 582 | 556 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | | | | | | 5 | | | | | | |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 1% | 2% | 3% | 0% | 2% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | | NA | Perm | Split | NA | Prot | | | |
| Protected Phases | 5 | 2 | | | 6 | | 8 | 8 | 8 | | | |
| Permitted Phases | | | | | | 6 | | | | | | |
| Actuated Green, G (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Effective Green, g (s) | 20.4 | 54.3 | | | 29.3 | 29.3 | 24.7 | 24.7 | 24.7 | | | |
| Actuated g/C Ratio | 0.23 | 0.60 | | | 0.33 | 0.33 | 0.27 | 0.27 | 0.27 | | | |
| Clearance Time (s) | 4.6 | 5.7 | | | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Lane Grp Cap (vph) | 409 | 3067 | | | 1672 | 505 | 456 | 410 | 412 | | | |
| v/s Ratio Prot | c0.24 | 0.38 | | | 0.37 | | c0.41 | 0.39 | 0.37 | | | |
| v/s Ratio Perm | | | | | | c0.38 | | | | | | |
| v/c Ratio | 1.08 | 0.63 | | | 1.13 | 1.17 | 1.49 | 1.42 | 1.35 | | | |
| Uniform Delay, d1 | 34.8 | 11.4 | | | 30.4 | 30.4 | 32.6 | 32.6 | 32.6 | | | |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Incremental Delay, d2 | 66.3 | 1.0 | | | 68.6 | 96.7 | 233.4 | 202.8 | 172.8 | | | |
| Delay (s) | 101.1 | 12.4 | | | 98.9 | 127.1 | 266.1 | 235.4 | 205.5 | | | |
| Level of Service | F | B | | | F | F | F | F | F | | | |
| Approach Delay (s) | | 28.9 | | | 108.8 | | | 236.6 | | | 0.0 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 117.1 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.25 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 15.6 |
| Intersection Capacity Utilization | 196.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 536 | 853 | 0 | 0 | 468 | 20 | 233 | 0 | 238 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 576 | 917 | 0 | 0 | 503 | 22 | 251 | 0 | 256 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 525 | | | 917 | | | 2584 | 2595 | 917 | 2840 | 2584 | 514 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 525 | | | 917 | | | 2584 | 2595 | 917 | 2840 | 2584 | 514 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 45 | | | 100 | | | 0 | 100 | 23 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1042 | | | 752 | | | 9 | 11 | 331 | 1 | 12 | 564 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 576 | 917 | 525 | 506 |
| Volume Left | 576 | 0 | 0 | 251 |
| Volume Right | 0 | 0 | 22 | 256 |
| cSH | 1042 | 1700 | 1700 | 19 |
| Volume to Capacity | 0.55 | 0.54 | 0.31 | 27.29 |
| Queue Length 95th (ft) | 88 | 0 | 0 | Err |
| Control Delay (s) | 12.6 | 0.0 | 0.0 | Err |
| Lane LOS | B | | | F |
| Approach Delay (s) | 4.9 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2008.6 | | |
| Intersection Capacity Utilization | 122.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Dexter Avenue / 11th Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Uncontrolled | | | | | | Uncontrolled | | | | | | Stop Sign | | | | | | Stop Sign | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 1 | | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 1! | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 277 | 146 | | 30 | | | 16 | | 81 | | 107 | | 72 | 482 | | 305 | | | 26 | 575 | | | 7 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | | 1.00 | |
| Initial Bse: | 277 | 146 | | 30 | | | 16 | | 81 | | 107 | | 72 | 482 | | 305 | | | 26 | 575 | | | 7 | |
| Added Vol: | 0 | 12 | | 18 | | | 0 | | 12 | | 0 | | 0 | 0 | | 0 | | | 18 | 0 | | | 0 | |
| PasserByVol: | 0 | 0 | | 0 | | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | | 0 | |
| Initial Fut: | 277 | 158 | | 48 | | | 16 | | 93 | | 107 | | 72 | 482 | | 305 | | | 44 | 575 | | | 7 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | | 0.92 | | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | | 0.92 | 0.92 | | | 0.92 | |
| PHF Volume: | 301 | 172 | | 52 | | | 17 | | 101 | | 116 | | 78 | 524 | | 332 | | | 48 | 625 | | | 8 | |
| Reduct Vol: | 0 | 0 | | 0 | | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | | 0 | |
| FinalVolume: | 301 | 172 | | 52 | | | 17 | | 101 | | 116 | | 78 | 524 | | 332 | | | 48 | 625 | | | 8 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | | 7.1 | 6.5 | | 6.2 | | | 7.1 | 6.5 | | | 6.2 | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | | 3.5 | 4.0 | | 3.3 | | | 3.5 | 4.0 | | | 3.3 | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 217 | xxxx | xxxxx | | | | 224 | xxxx | xxxxx | | | | 1252 | 962 | | 101 | | | 1396 | 1026 | | | 172 | |
| Potent Cap.: | 1364 | xxxx | xxxxx | | | | 1357 | xxxx | xxxxx | | | | 151 | 258 | | 960 | | | 120 | 237 | | | 877 | |
| Move Cap.: | 1364 | xxxx | xxxxx | | | | 1357 | xxxx | xxxxx | | | | 0 | 187 | | 960 | | | 0 | 172 | | | 877 | |
| Volume/Cap: | 0.22 | xxxx | xxxx | | | | 0.01 | xxxx | xxxx | | | | xxxx | 2.80 | | 0.35 | | | xxxx | 3.64 | | | 0.01 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.8 | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | | xxxxx | |
| Control Del: | 8.4 | xxxx | xxxxx | | | | 7.7 | xxxx | xxxxx | | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | | xxxxx | |
| LOS by Move: | A | * | | * | | | A | * | | * | | | * | * | | * | | | * | * | | | * | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | | 0 | xxxxx | | | xxxx | | 0 | xxxxx | | |
| SharedQueue: | 0.8 | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | |
| Shrd ConDel: | 8.4 | xxxx | xxxxx | | | | 7.7 | xxxx | xxxxx | | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | |
| Shared LOS: | A | * | | * | | | A | * | | * | | | * | * | | * | | | * | * | | | * | |
| ApproachDel: | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | * | | | | | | * | | | | | | F | | | | | | F | | | | | |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 77 | 0 | 0 | 22 | 0 | 112 | 29 | 0 | 436 | 23 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 0 | 0 | 83 | 0 | 0 | 24 | 0 | 120 | 31 | 0 | 469 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 211 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 613 | 620 | 469 | 672 | 614 | 120 | 494 | | | 152 | | |
| vC1, stage 1 conf vol | 469 | 469 | | 120 | 120 | | | | | | | |
| vC2, stage 2 conf vol | 144 | 152 | | 552 | 494 | | | | | | | |
| vCu, unblocked vol | 613 | 620 | 469 | 672 | 614 | 120 | 494 | | | 152 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 86 | 100 | 100 | 97 | 100 | | | 100 | | |
| cM capacity (veh/h) | 546 | 533 | 599 | 434 | 525 | 936 | 1080 | | | 1442 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 83 | 24 | 120 | 31 | 469 | 25 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 83 | 24 | 0 | 31 | 0 | 25 |
| cSH | 599 | 936 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.14 | 0.03 | 0.07 | 0.02 | 0.28 | 0.01 |
| Queue Length 95th (ft) | 12 | 2 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 12.0 | 8.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 12.0 | 8.9 | 0.0 | | 0.0 | |
| Approach LOS | B | A | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 34.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 16 | 5 | 80 | 203 | 5 | 30 | 95 | 90 | 80 | 63 | 383 | 57 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 18 | 5 | 88 | 223 | 5 | 33 | 104 | 99 | 88 | 69 | 421 | 63 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | TWLTL | | | TWLTL | |
| Median storage veh) | | | | | | | | 2 | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | 649 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 902 | 955 | 421 | 958 | 930 | 99 | 484 | | | 187 | | |
| vC1, stage 1 conf vol | 559 | 559 | | 308 | 308 | | | | | | | |
| vC2, stage 2 conf vol | 343 | 396 | | 650 | 622 | | | | | | | |
| vCu, unblocked vol | 902 | 955 | 421 | 958 | 930 | 99 | 484 | | | 187 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 96 | 99 | 86 | 14 | 99 | 97 | 90 | | | 95 | | |
| cM capacity (veh/h) | 400 | 388 | 637 | 260 | 336 | 962 | 1090 | | | 1400 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 111 | 261 | 104 | 99 | 88 | 69 | 421 | 63 |
| Volume Left | 18 | 223 | 104 | 0 | 0 | 69 | 0 | 0 |
| Volume Right | 88 | 33 | 0 | 0 | 88 | 0 | 0 | 63 |
| cSH | 566 | 288 | 1090 | 1700 | 1700 | 1400 | 1700 | 1700 |
| Volume to Capacity | 0.20 | 0.91 | 0.10 | 0.06 | 0.05 | 0.05 | 0.25 | 0.04 |
| Queue Length 95th (ft) | 18 | 209 | 8 | 0 | 0 | 4 | 0 | 0 |
| Control Delay (s) | 12.9 | 70.8 | 8.7 | 0.0 | 0.0 | 7.7 | 0.0 | 0.0 |
| Lane LOS | B | F | A | | | A | | |
| Approach Delay (s) | 12.9 | 70.8 | 3.1 | | | 1.0 | | |
| Approach LOS | B | F | | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 17.6 | | |
| Intersection Capacity Utilization | 55.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 31 | 156 | 23 | 111 | 634 | 69 | 24 | 165 | 141 | 194 | 405 | 81 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 33 | 164 | 24 | 117 | 667 | 73 | 25 | 174 | 148 | 204 | 426 | 85 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | TWLTL | |
| Median storage veh) | | | | | | | | | | | 2 | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1582 | 1250 | 469 | 1282 | 1218 | 248 | 512 | | | 322 | | |
| vC1, stage 1 conf vol | 877 | 877 | | 298 | 298 | | | | | | | |
| vC2, stage 2 conf vol | 705 | 373 | | 984 | 920 | | | | | | | |
| vCu, unblocked vol | 1582 | 1250 | 469 | 1282 | 1218 | 248 | 512 | | | 322 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | 6.1 | 5.5 | | 6.1 | 5.5 | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 39 | 96 | 0 | 0 | 91 | 98 | | | 84 | | |
| cM capacity (veh/h) | 0 | 269 | 598 | 86 | 258 | 796 | 1064 | | | 1249 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 221 | 857 | 347 | 716 |
| Volume Left | 33 | 117 | 25 | 204 |
| Volume Right | 24 | 73 | 148 | 85 |
| cSH | 0 | 212 | 1064 | 1249 |
| Volume to Capacity | Err | 4.04 | 0.02 | 0.16 |
| Queue Length 95th (ft) | Err | Err | 2 | 15 |
| Control Delay (s) | Err | Err | 0.8 | 3.8 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | Err | Err | 0.8 | 3.8 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 122.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Dexter Avenue / 2nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 0 | Critical Vol./Cap.(X): | 1.500 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 141.1 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 1! 0 | | | 0 0 1! 0 | | | 0 0 1! 0 | | | 0 0 1! 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 5 | 7 | 35 | 15 | 441 | 257 | 5 | 5 | 5 | 756 | 19 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 5 | 5 | 7 | 35 | 15 | 441 | 257 | 5 | 5 | 5 | 756 | 19 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 48 | 48 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 5 | 5 | 7 | 35 | 15 | 489 | 305 | 5 | 5 | 5 | 756 | 19 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 5 | 5 | 7 | 37 | 16 | 524 | 327 | 5 | 5 | 5 | 809 | 20 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 5 | 7 | 37 | 16 | 524 | 327 | 5 | 5 | 5 | 809 | 20 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 5 | 5 | 7 | 37 | 16 | 524 | 327 | 5 | 5 | 5 | 809 | 20 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.29 | 0.29 | 0.42 | 0.06 | 0.03 | 0.91 | 0.97 | 0.01 | 0.02 | 0.01 | 0.97 | 0.02 |
| Final Sat.: | 122 | 122 | 171 | 39 | 17 | 541 | 488 | 8 | 8 | 4 | 539 | 14 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.04 | 0.97 | 0.97 | 0.97 | 0.67 | 0.67 | 0.67 | 1.50 | 1.50 | 1.50 |
| Crit Moves: | | **** | | | **** | | **** | | | | | **** |
| Delay/Veh: | 11.4 | 11.4 | 11.4 | 52.9 | 52.9 | 52.9 | 22.7 | 22.7 | 22.7 | 252.6 | 253 | 252.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.4 | 11.4 | 11.4 | 52.9 | 52.9 | 52.9 | 22.7 | 22.7 | 22.7 | 252.6 | 253 | 252.6 |
| LOS by Move: | B | B | B | F | F | F | C | C | C | F | F | F |
| ApproachDel: | 11.4 | | | 52.9 | | | 22.7 | | | 252.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 11.4 | | | 52.9 | | | 22.7 | | | 252.6 | | |
| LOS by Appr: | B | | | F | | | C | | | F | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 7.3 | 7.3 | 7.3 | 1.8 | 1.8 | 1.8 | 37.6 | 37.6 | 37.6 |

Note: Queue reported is the number of cars per lane.

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| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 533 | 557 | 199 | 139 | 680 | 288 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 579 | 605 | 216 | 151 | 739 | 313 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1479 | 896 | 1052 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1479 | 896 | 1052 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 0 | 67 | | | |
| cM capacity (veh/h) | 94 | 342 | 662 | | | |

| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 579 | 605 | 367 | 1052 |
| Volume Left | 579 | 0 | 216 | 0 |
| Volume Right | 0 | 605 | 0 | 313 |
| cSH | 94 | 342 | 662 | 1700 |
| Volume to Capacity | 6.19 | 1.77 | 0.33 | 0.62 |
| Queue Length 95th (ft) | Err | 970 | 36 | 0 |
| Control Delay (s) | Err | 384.8 | 9.6 | 0.0 |
| Lane LOS | F | F | A | |
| Approach Delay (s) | 5086.1 | | 9.6 | 0.0 |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2315.1 | | |
| Intersection Capacity Utilization | 111.2% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 483 | 1390 | 856 | 705 | 1468 | 405 | 551 | 349 | 679 | 384 | 482 | 509 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.91 | | 0.97 | 0.95 | | 1.00 | 0.95 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 0.90 | | 1.00 | 0.99 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3502 | 3539 | 1587 | 1805 | 4885 | | 3502 | 3216 | | 1805 | 1775 | 1513 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3502 | 3539 | 1587 | 1805 | 4885 | | 3502 | 3216 | | 1805 | 1775 | 1513 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 493 | 1418 | 873 | 719 | 1498 | 413 | 562 | 356 | 693 | 392 | 492 | 519 |
| RTOR Reduction (vph) | 0 | 0 | 386 | 0 | 42 | 0 | 0 | 89 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 493 | 1418 | 487 | 719 | 1870 | 0 | 562 | 960 | 0 | 392 | 544 | 467 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | | | 5 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | | Split | NA | pm+ov |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | 5 |
| Permitted Phases | | | 2 | | | | | | | | | 4 |
| Actuated Green, G (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Effective Green, g (s) | 6.5 | 35.0 | 35.0 | 8.5 | 37.0 | | 37.0 | 37.0 | | 17.0 | 17.0 | 23.5 |
| Actuated g/C Ratio | 0.05 | 0.29 | 0.29 | 0.07 | 0.31 | | 0.31 | 0.31 | | 0.14 | 0.14 | 0.20 |
| Clearance Time (s) | 4.5 | 6.0 | 6.0 | 4.5 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 4.5 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 189 | 1032 | 462 | 127 | 1506 | | 1079 | 991 | | 255 | 251 | 296 |
| v/s Ratio Prot | 0.14 | c0.40 | | c0.40 | 0.38 | | 0.16 | c0.30 | | 0.22 | c0.31 | 0.09 |
| v/s Ratio Perm | | | 0.31 | | | | | | | | | 0.22 |
| v/c Ratio | 2.61 | 1.37 | 1.05 | 5.66 | 1.24 | | 0.52 | 1.19dr | | 1.54 | 2.17 | 1.58 |
| Uniform Delay, d1 | 56.8 | 42.5 | 42.5 | 55.8 | 41.5 | | 34.2 | 40.9 | | 51.5 | 51.5 | 48.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 738.9 | 174.5 | 56.8 | 2114.7 | 114.4 | | 1.8 | 21.9 | | 260.5 | 538.3 | 275.6 |
| Delay (s) | 795.7 | 217.0 | 99.3 | 2170.5 | 155.9 | | 36.0 | 62.9 | | 312.0 | 589.8 | 323.9 |
| Level of Service | F | F | F | F | F | | D | E | | F | F | F |
| Approach Delay (s) | | 282.6 | | | 706.7 | | | 53.5 | | | 423.7 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 394.6 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.73 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 149.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 2319 | 268 | 0 | 2522 | 0 | 177 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2521 | 291 | 0 | 2741 | 0 | 192 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | 531 | | | 516 | | |
| pX, platoon unblocked | | | 0.65 | | 0.65 | 0.65 |
| vC, conflicting volume | | | 2812 | | 3206 | 840 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 1912 | | 2516 | 0 |
| tC, single (s) | | | 4.1 | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 73 |
| cM capacity (veh/h) | | | 205 | | 16 | 711 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | EB 4 | WB 1 | WB 2 | WB 3 | WB 4 | NB 1 |
|---|---|---|---|---|---|---|---|---|---|
| Volume Total | 840 | 840 | 840 | 291 | 685 | 685 | 685 | 685 | 192 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 291 | 0 | 0 | 0 | 0 | 192 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 711 |
| Volume to Capacity | 0.49 | 0.49 | 0.49 | 0.17 | 0.40 | 0.40 | 0.40 | 0.40 | 0.27 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.9 |
| Lane LOS | | | | | | | | | B |
| Approach Delay (s) | 0.0 | | | | 0.0 | | | | 11.9 |
| Approach LOS | | | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 62.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 609 | 1020 | 570 | 573 | 1216 | 386 | 720 | 592 | 260 | 335 | 290 | 558 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Lane Util. Factor | 0.97 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.95 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.97 | 1.00 |
| Satd. Flow (prot) | 3502 | 3309 | | 1805 | 3505 | 1586 | 1805 | 1804 | | | 1849 | 1586 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.16 | 1.00 | | | 0.12 | 1.00 |
| Satd. Flow (perm) | 3502 | 3309 | | 1805 | 3505 | 1586 | 308 | 1804 | | | 236 | 1586 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 641 | 1074 | 600 | 603 | 1280 | 406 | 758 | 623 | 274 | 353 | 305 | 587 |
| RTOR Reduction (vph) | 0 | 64 | 0 | 0 | 0 | 69 | 0 | 15 | 0 | 0 | 0 | 229 |
| Lane Group Flow (vph) | 641 | 1610 | 0 | 603 | 1280 | 337 | 758 | 882 | 0 | 0 | 658 | 358 |
| Confl. Peds. (#/hr) | | | 5 | | | 5 | | | 5 | 5 | | 5 |
| Heavy Vehicles (%) | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | NA | | Prot | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | | | | 6 | 8 | | | 4 | | 4 |
| Actuated Green, G (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Effective Green, g (s) | 20.4 | 54.0 | | 10.4 | 44.0 | 44.0 | 24.7 | 24.7 | | | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.19 | 0.51 | | 0.10 | 0.42 | 0.42 | 0.24 | 0.24 | | | 0.24 | 0.24 |
| Clearance Time (s) | 4.6 | 6.0 | | 4.6 | 6.0 | 6.0 | 5.3 | 5.3 | | | 5.3 | 5.3 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 680 | 1701 | | 178 | 1468 | 664 | 72 | 424 | | | 55 | 373 |
| v/s Ratio Prot | c0.18 | c0.49 | | c0.33 | 0.37 | | | 0.49 | | | | |
| v/s Ratio Perm | | | | | | 0.21 | 2.46 | | | | c2.78 | 0.23 |
| v/c Ratio | 0.94 | 0.95 | | 3.39 | 0.87 | 0.51 | 10.53 | 2.08 | | | 11.96 | 0.96 |
| Uniform Delay, d1 | 41.7 | 24.1 | | 47.3 | 27.9 | 22.5 | 40.1 | 40.1 | | | 40.1 | 39.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 21.5 | 12.4 | | 1088.6 | 7.4 | 2.8 | 4314.9 | 493.8 | | | 4969.1 | 35.4 |
| Delay (s) | 63.2 | 36.5 | | 1135.9 | 35.3 | 25.3 | 4355.1 | 534.0 | | | 5009.2 | 75.1 |
| Level of Service | E | D | | F | D | C | F | F | | | F | E |
| Approach Delay (s) | | 43.9 | | | 323.5 | | | 2284.1 | | | 2682.9 | |
| Approach LOS | | D | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 1061.1 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 4.26 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 15.9 |
| Intersection Capacity Utilization | 177.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 1572 | 1265 | 168 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1709 | 1375 | 183 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | TWLTL | TWLTL | |
| Median storage veh) | | | | 2 | 2 | |
| Upstream signal (ft) | | | | | 307 | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2321 | 779 | 1558 | | | |
| vC1, stage 1 conf vol | 1466 | | | | | |
| vC2, stage 2 conf vol | 854 | | | | | |
| vCu, unblocked vol | 2321 | 779 | 1558 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | 5.8 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 161 | 343 | 430 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|
| Volume Total | 0 | 854 | 854 | 917 | 641 |
| Volume Left | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 0 | 183 |
| cSH | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 0.50 | 0.50 | 0.54 | 0.38 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | | | |
| Approach Delay (s) | 0.0 | 0.0 | | 0.0 | |
| Approach LOS | A | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 46.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 429 | 6 | 6 | 1143 | 1094 | 171 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | | 1.00 | 0.95 | 0.95 | |
| Frpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1806 | | 1805 | 3610 | 3524 | |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1806 | | 1805 | 3610 | 3524 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 466 | 7 | 7 | 1242 | 1189 | 186 |
| RTOR Reduction (vph) | 1 | 0 | 0 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 472 | 0 | 7 | 1242 | 1361 | 0 |
| Confl. Peds. (#/hr) | | 5 | | | | 5 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Prot | | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.6 | | 0.8 | 42.4 | 37.1 | |
| Effective Green, g (s) | 23.6 | | 0.8 | 42.4 | 37.1 | |
| Actuated g/C Ratio | 0.31 | | 0.01 | 0.57 | 0.49 | |
| Clearance Time (s) | 4.5 | | 4.5 | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 568 | | 19 | 2040 | 1743 | |
| v/s Ratio Prot | c0.26 | | 0.00 | c0.34 | c0.39 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.83 | | 0.37 | 0.61 | 0.78 | |
| Uniform Delay, d1 | 23.9 | | 36.8 | 10.8 | 15.6 | |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 10.1 | | 11.7 | 1.4 | 3.5 | |
| Delay (s) | 33.9 | | 48.5 | 12.2 | 19.2 | |
| Level of Service | C | | D | B | B | |
| Approach Delay (s) | 33.9 | | | 12.4 | 19.2 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 67.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 395 | 62 | 34 | 22 | 386 | 259 | 34 | 595 | 37 | 198 | 482 | 420 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 429 | 67 | 37 | 24 | 420 | 282 | 37 | 647 | 40 | 215 | 524 | 457 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 534 | 725 | 724 | 1196 |
| Volume Left (vph) | 429 | 24 | 37 | 215 |
| Volume Right (vph) | 37 | 282 | 40 | 457 |
| Hadj (s) | 0.12 | -0.23 | -0.02 | -0.19 |
| Departure Headway (s) | 9.7 | 9.3 | 9.5 | 9.4 |
| Degree Utilization, x | 1.0 | 1.0 | 1.0 | 1.0 |
| Capacity (veh/h) | 382 | 391 | 383 | 397 |
| Control Delay (s) | 236.6 | 427.7 | 445.0 | 976.7 |
| Approach Delay (s) | 236.6 | 427.7 | 445.0 | 976.7 |
| Approach LOS | F | F | F | F |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 606.1 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 175.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #29 Conard Avenue / Central Avenue (SR-74)

Cycle (sec): 120 Critical Vol./Cap.(X): 1.354
Loss Time (sec): 12 Average Delay (sec/veh): 142.6
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 29 | 29 | 29 | 10 | 10 | 10 | 10 | 26 | 26 | 10 | 26 | 26 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 1 | 0 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 56 | 78 | 17 | 207 | 33 | 598 | 272 | 1953 | 66 | 90 | 2243 | 96 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 56 | 78 | 17 | 207 | 33 | 598 | 272 | 1953 | 66 | 90 | 2243 | 96 |
| Added Vol: | 6 | 0 | 0 | 0 | 0 | 12 | 12 | 78 | 6 | 0 | 78 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 62 | 78 | 17 | 207 | 33 | 610 | 284 | 2031 | 72 | 90 | 2321 | 96 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 64 | 81 | 18 | 214 | 34 | 631 | 294 | 2100 | 74 | 93 | 2400 | 99 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 64 | 81 | 18 | 214 | 34 | 631 | 294 | 2100 | 74 | 93 | 2400 | 99 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 64 | 81 | 18 | 214 | 34 | 631 | 294 | 2100 | 74 | 93 | 2400 | 99 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.67 | 0.67 | 0.67 | 0.61 | 0.61 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 0.39 | 0.50 | 0.11 | 0.86 | 0.14 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 504 | 634 | 138 | 991 | 158 | 1615 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.13 | 0.22 | 0.22 | 0.39 | 0.16 | 0.58 | 0.05 | 0.05 | 0.66 | 0.06 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.12 | 0.53 | 0.53 | 0.08 | 0.49 | 0.49 |
| Volume/Cap: | 0.44 | 0.44 | 0.44 | 0.75 | 0.75 | 1.35 | 1.35 | 1.10 | 0.09 | 0.62 | 1.35 | 0.13 |
| Delay/Veh: | 35.6 | 35.6 | 35.6 | 47.8 | 47.8 | 215.4 | 239.0 | 82.7 | 14.1 | 60.8 | 193 | 16.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 35.6 | 35.6 | 35.6 | 47.8 | 47.8 | 215.4 | 239.0 | 82.7 | 14.1 | 60.8 | 193 | 16.6 |
| LOS by Move: | D | D | D | D | D | F | F | F | B | E | F | B |
| HCM2kAvgQ: | 5 | 5 | 5 | 10 | 10 | 45 | 22 | 57 | 1 | 4 | 87 | 2 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #30 Rosetta Canyon Drive / Central Avenue (SR-74)

Cycle (sec): 115 Critical Vol./Cap.(X): 0.942
Loss Time (sec): 12 Average Delay (sec/veh): 41.7
Optimal Cycle: OPTIMIZED Level Of Service: D

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - | R | L | - T | - | R | L | - T | - | R | L | - T | - | R |
| Control: | Split Phase | | | | Split Phase | | | | Permitted | | | | Protected | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Min. Green: | 33 | 0 | 33 | | 0 | 0 | 0 | | 0 | 32 | 32 | | 10 | 10 | 0 | |
| Y+R: | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lanes: | 1 | 0 | 0 | 0 1 | 0 | 0 | 0 | 0 0 | 0 | 0 | 3 | 0 1 | 1 | 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 458 | 0 | 228 | | 0 | 0 | 0 | | 0 | 1738 | 473 | | 337 | 1856 | 0 | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Initial Bse: | 458 | 0 | 228 | | 0 | 0 | 0 | | 0 | 1738 | 473 | | 337 | 1856 | 0 | |
| Added Vol: | 18 | 0 | 0 | | 0 | 0 | 0 | | 0 | 60 | 18 | | 0 | 60 | 0 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 476 | 0 | 228 | | 0 | 0 | 0 | | 0 | 1798 | 491 | | 337 | 1916 | 0 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | |
| PHF Volume: | 504 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1903 | 520 | | 357 | 2028 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduced Vol: | 504 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1903 | 520 | | 357 | 2028 | 0 | |
| PCE Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| MLF Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| FinalVolume: | 504 | 0 | 241 | | 0 | 0 | 0 | | 0 | 1903 | 520 | | 357 | 2028 | 0 | |
| Saturation Flow Module: | | | | | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | |
| Adjustment: | 0.95 | 1.00 | 0.85 | | 1.00 | 1.00 | 1.00 | | 1.00 | 0.91 | 0.85 | | 0.95 | 0.95 | 1.00 | |
| Lanes: | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 3.00 | 1.00 | | 1.00 | 2.00 | 0.00 | |
| Final Sat.: | 1805 | 0 | 1615 | | 0 | 0 | 0 | | 0 | 5187 | 1615 | | 1805 | 3610 | 0 | |
| Capacity Analysis Module: | | | | | | | | | | | | | | | | |
| Vol/Sat: | 0.28 | 0.00 | 0.15 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.37 | 0.32 | | 0.20 | 0.56 | 0.00 | |
| Crit Moves: | **** | | | | | | | | | **** | | | **** | | | |
| Green/Cycle: | 0.30 | 0.00 | 0.30 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.39 | 0.39 | | 0.21 | 0.60 | 0.00 | |
| Volume/Cap: | 0.94 | 0.00 | 0.50 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.94 | 0.83 | | 0.94 | 0.94 | 0.00 | |
| Delay/Veh: | 64.7 | 0.0 | 34.3 | | 0.0 | 0.0 | 0.0 | | 0.0 | 43.4 | 40.4 | | 76.3 | 29.6 | 0.0 | |
| User DelAdj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 64.7 | 0.0 | 34.3 | | 0.0 | 0.0 | 0.0 | | 0.0 | 43.4 | 40.4 | | 76.3 | 29.6 | 0.0 | |
| LOS by Move: | E | A | C | | A | A | A | | A | D | D | | E | C | A | |
| HCM2kAvgQ: | 22 | 0 | 7 | | 0 | 0 | 0 | | 0 | 28 | 19 | | 17 | 39 | 0 | |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #31 Riverside Street / Central Avenue (SR-74)

Cycle (sec): 75 Critical Vol./Cap.(X): 2.749
Loss Time (sec): 12 Average Delay (sec/veh): 271.8
Optimal Cycle: OPTIMIZED Level Of Service: F

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 29 | 29 | 10 | 10 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 1 | 0 | 1 0 | 0 0 | 1! 0 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 365 | 902 | 329 | 356 | 746 | 205 | 231 | 1608 | 277 | 304 | 1610 | 464 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 365 | 902 | 329 | 356 | 746 | 205 | 231 | 1608 | 277 | 304 | 1610 | 464 |
| Added Vol: | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 12 | 0 | 42 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 377 | 902 | 329 | 356 | 746 | 205 | 231 | 1650 | 289 | 304 | 1652 | 464 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| PHF Volume: | 393 | 940 | 343 | 371 | 777 | 214 | 241 | 1719 | 301 | 317 | 1721 | 483 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 393 | 940 | 343 | 371 | 777 | 214 | 241 | 1719 | 301 | 317 | 1721 | 483 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 393 | 940 | 343 | 371 | 777 | 214 | 241 | 1719 | 301 | 317 | 1721 | 483 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 0.91 | 0.91 | 0.97 | 0.97 | 0.97 | 0.50 | 0.50 | 0.85 | 0.95 | 0.92 | 0.92 |
| Lanes: | 1.00 | 1.47 | 0.53 | 0.27 | 0.57 | 0.16 | 0.25 | 1.75 | 1.00 | 1.00 | 1.56 | 0.44 |
| Final Sat.: | 1728 | 2532 | 924 | 500 | 1048 | 288 | 232 | 1656 | 1615 | 1805 | 2725 | 765 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.23 | 0.37 | 0.37 | 0.74 | 0.74 | 0.74 | 1.04 | 1.04 | 0.19 | 0.18 | 0.63 | 0.63 |
| Crit Moves: | | **** | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.35 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.13 | 0.50 | 0.50 |
| Volume/Cap: | 0.66 | 1.07 | 1.07 | xxxx | xxxx | xxxx | 2.79 | 2.79 | 0.50 | 1.37 | 1.26 | 1.26 |
| Delay/Veh: | 22.2 | 70.2 | 70.2 | 0.0 | 0.0 | 0.0 | 834.5 | 835 | 19.6 | 224.9 | 143 | 142.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 22.2 | 70.2 | 70.2 | 0.0 | 0.0 | 0.0 | 834.5 | 835 | 19.6 | 224.9 | 143 | 142.5 |
| LOS by Move: | C | E | E | A | A | A | F | F | B | F | F | F |
| HCM2kAvgQ: | 9 | 27 | 27 | 29 | 29 | 29 | 107 | 107 | 6 | 20 | 60 | 60 |

Note: Queue reported is the number of cars per lane.

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LAKE ELSINORE WALMART TIA (JN 08651)
General Plan Buildout (Post-2035) With Project Conditions
Saturday Mid-Day Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #32 Meadowbrook Avenue/Greenwald Avenue / Central Avenue (SR-74)

| | | | |
|---|---|---|---|
| Cycle (sec): | 120 | Critical Vol./Cap.(X): | 1.316 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 135.4 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 34 | 34 | 34 | 10 | 10 | 10 | 10 | 25 | 25 | 10 | 25 | 25 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 330 | 24 | 405 | 35 | 27 | 307 | 225 | 1692 | 287 | 274 | 1615 | 315 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 330 | 24 | 405 | 35 | 27 | 307 | 225 | 1692 | 287 | 274 | 1615 | 315 |
| Added Vol: | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 12 | 0 | 18 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 342 | 24 | 405 | 35 | 27 | 307 | 225 | 1710 | 299 | 274 | 1633 | 315 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 368 | 26 | 435 | 38 | 29 | 330 | 242 | 1839 | 322 | 295 | 1756 | 339 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 368 | 26 | 435 | 38 | 29 | 330 | 242 | 1839 | 322 | 295 | 1756 | 339 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 368 | 26 | 435 | 38 | 29 | 330 | 242 | 1839 | 322 | 295 | 1756 | 339 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.38 | 0.86 | 0.86 | 0.27 | 0.86 | 0.86 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 |
| Lanes: | 1.00 | 0.06 | 0.94 | 1.00 | 0.08 | 0.92 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 718 | 91 | 1539 | 513 | 132 | 1505 | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.51 | 0.28 | 0.28 | 0.07 | 0.22 | 0.22 | 0.13 | 0.51 | 0.20 | 0.16 | 0.49 | 0.21 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.11 | 0.39 | 0.39 | 0.12 | 0.40 | 0.40 |
| Volume/Cap: | 1.32 | 0.73 | 0.73 | 0.19 | 0.56 | 0.56 | 1.21 | 1.32 | 0.51 | 1.32 | 1.21 | 0.52 |
| Delay/Veh: | 202.0 | 35.5 | 35.5 | 24.6 | 29.9 | 29.9 | 186.8 | 184 | 28.9 | 222.8 | 139 | 28.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 202.0 | 35.5 | 35.5 | 24.6 | 29.9 | 29.9 | 186.8 | 184 | 28.9 | 222.8 | 139 | 28.1 |
| LOS by Move: | F | D | D | C | C | C | F | F | C | F | F | C |
| HCM2kAvgQ: | 27 | 16 | 16 | 1 | 11 | 11 | 17 | 65 | 9 | 22 | 56 | 10 |

Note: Queue reported is the number of cars per lane.

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# APPENDIX 7.3

General Plan Buildout (Post-2035) Without Project Conditions
Traffic Signal Warrant Analysis Worksheets

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2035 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Riverside Drive (SR-74)**

Minor Street: **Gunnerson Street**

Critical Approach Speed (Major) 40 mph

Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **42,432** vpd

Minor Street Future ADT = **2,285** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| | XX | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **42,432** | *1* **2,285** | 8,000 * | 5,600 | 2,400 | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **42,432** | *1* **2,285** | 12,000 * | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 95% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| | | | |

TRAFFIC CONDITIONS **2035 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Nichols Road**

Minor Street: **I-15 NB Ramps**

Critical Approach Speed (Major) 35 mph

Critical Approach Speed (Minor) 45 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **57,940** vpd

Minor Street Future ADT = **8,880** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **57,940** | *1* **8,880** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **57,940** | *1* **8,880** | 12,000 * | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2035 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/06/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/06/15 |
| Major Street: | **11th Street** | | | | Critical Approach Speed (Major) | | 45 mph |
| Minor Street: | **Dexter Avenue** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **15,769** vpd  Minor Street Future ADT = **4,498** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [√]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **15,769** | *1* **4,498** | 8,000 | 5,600 * | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **15,769** | *1* **4,498** | 12,000 | 8,400 * | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2035 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/06/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/06/15 |
| Major Street: | **Dexter Avenue** | | | | Critical Approach Speed (Major) | | 45 mph |
| Minor Street: | **3rd Street** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **9,913** vpd  Minor Street Future ADT = **7,500** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [√]

or  **RURAL (R)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Satisfied | Not Satisfied | | | | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **9,913** | *1* **7,500** | 8,000 | 5,600 * | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| Satisfied | Not Satisfied | | | | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **9,913** | *1* **7,500** | 12,000 | 8,400 * | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% / **B** 100% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2035 NP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Camino del Norte**

Minor Street: **N. Main Street**

Critical Approach Speed (Major) 55 mph

Critical Approach Speed (Minor) 30 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **18,016** vpd

Minor Street Future ADT = **13,000** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... [√]

or

In built up area of isolated community of < 10,000 population ..... [ ]

**RURAL (R)**

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| | XX | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **18,016** | *1* **13,000** | 8,000 | 5,600 * | 2,400 | 1,680 * |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **18,016** | *1* **13,000** | 12,000 | 8,400 * | 1,200 | 850 * |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ..... | **A** 100% / **B** 100% | | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ___ | ___ | ___ | ___ | | TRAFFIC CONDITIONS | | **2035 NP** |
| DIST | CO | RTE | PM | CALC | IA | DATE | 04/06/15 |
| Jurisdiction: | **City of Lake Elsinore** | | | CHK | IA | DATE | 04/06/15 |
| Major Street: | **Cambern Avenue** | | | | Critical Approach Speed (Major) | | 25 mph |
| Minor Street: | **3rd Street** | | | | Critical Approach Speed (Minor) | | 25 mph |

Major Street Approach Lanes = **1** lane  Minor Street Approach Lanes **1** lane

Major Street Future ADT = **16,987** vpd  Minor Street Future ADT = **3,750** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..  [ ]

or  **URBAN (U)**

In built up area of isolated community of < 10,000 population ……  [ ]

### (Based on Estimated Average Daily Traffic - See Note)

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **16,987** | *1* **3,750** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **16,987** | *1* **3,750** | 12,000 * | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# APPENDIX 7.4

General Plan Buildout (Post-2035) With Project Conditions
Traffic Signal Warrant Analysis Worksheets

# Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| DIST | CO | RTE | PM |
|---|---|---|---|
| ___ | ___ | ___ | ___ |

TRAFFIC CONDITIONS **2035 WP**

CALC IA DATE 04/06/15

CHK IA DATE 04/06/15

Jurisdiction: **City of Lake Elsinore**

Major Street: **Cambern Avenue**

Minor Street: **Driveway 3**

Critical Approach Speed (Major) 25 mph

Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane

Minor Street Approach Lanes **1** lane

Major Street Future ADT = **23,972** vpd

Minor Street Future ADT = **2,980** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

**URBAN (U)**

**(Based on Estimated Average Daily Traffic - See Note)**

| URBAN | RURAL | Minimum Requirements EADT | | | |
|---|---|---|---|---|---|
| XX | | | | | |
| **CONDITION A - Minimum Vehicular Volume** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **23,972** | *1* **2,980** | 8,000 * | 5,600 | 2,400 * | 1,680 |
| *2 +* | *1* | 9,600 | 6,720 | 2,400 | 1,680 |
| *2 +* | *2 +* | 9,600 | 6,720 | 3,200 | 2,240 |
| *1* | *2 +* | 8,000 | 5,600 | 3,200 | 2,240 |
| **CONDITION B - Interruption of Continuous Traffic** | | | | | |
| Satisfied | Not Satisfied | Vehicles Per Day on Major Street (Total of Both Approaches) | | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) | |
| XX | | | | | |
| Number of lanes for moving traffic on each approach | | | | | |
| Major Street | Minor Street | Urban | Rural | Urban | Rural |
| *1* **23,972** | *1* **2,980** | 12,000 * | 8,400 | 1,200 * | 850 |
| *2 +* | *1* | 14,400 | 10,080 | 1,200 | 850 |
| *2 +* | *2 +* | 14,400 | 10,080 | 1,600 | 1,120 |
| *1* | *2 +* | 12,000 | 8,400 | 1,600 | 1,120 |
| **Combination of CONDITIONS A + B** | | | | | |
| Satisfied | Not Satisfied | 2 CONDITIONS 80% | | 2 CONDITIONS 80% | |
| XX | | | | | |
| No one condition satisfied, but following conditions fulfilled 80% of more ….. | **A** 100% | **B** 100% | | | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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# APPENDIX 7.5

General Plan Buildout (Post-2035) Without Project Conditions
Ramp Queuing Analysis Worksheets

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 607 | 1463 | 0 | 0 | 1468 | 554 | 285 | 0 | 947 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 660 | 1590 | 0 | 0 | 1596 | 602 | 310 | 0 | 1029 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2198 | | | 1590 | | | 4807 | 5108 | 1590 | 5836 | 4807 | 1897 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2198 | | | 1590 | | | 4807 | 5108 | 1590 | 5836 | 4807 | 1897 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 228 | | | 418 | | | 0 | 0 | 134 | 0 | 0 | 88 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 660 | 1590 | 2198 | 1339 |
| Volume Left | 660 | 0 | 0 | 310 |
| Volume Right | 0 | 0 | 602 | 1029 |
| cSH | 228 | 1700 | 1700 | 0 |
| Volume to Capacity | 2.89 | 0.94 | 1.29 | Err |
| Queue Length 95th (ft) | 1455 | 0 | 0 | Err |
| Control Delay (s) | 894.6 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 262.3 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 228.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1348 | 812 | 848 | 2146 | 552 | 534 | 502 |
| v/c Ratio | 0.98 | 0.87 | 1.09 | 0.91 | 1.61 | 1.44 | 1.33 |
| Control Delay | 53.7 | 22.6 | 100.4 | 22.1 | 318.0 | 243.5 | 197.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 45.8 | 0.0 | 0.0 | 0.0 |
| Total Delay | 53.7 | 22.6 | 100.4 | 67.9 | 318.0 | 243.5 | 197.1 |
| Queue Length 50th (ft) | 486 | 216 | ~348 | 601 | ~589 | ~523 | ~444 |
| Queue Length 95th (ft) | #650 | #513 | #471 | 750 | #812 | #757 | #665 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1371 | 931 | 777 | 2367 | 343 | 370 | 377 |
| Starvation Cap Reductn | 0 | 0 | 0 | 446 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.98 | 0.87 | 1.09 | 1.12 | 1.61 | 1.44 | 1.33 |

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.

## 13: I-15 NB Off Ramp/I-15 NB On Ramp & Central Av. (SR-74)

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 354 | 1772 | 1953 | 723 | 687 | 662 | 624 |
| v/c Ratio | 0.98 | 0.61 | 1.20 | 0.78 | 1.47 | 1.36 | 1.32 |
| Control Delay | 79.6 | 12.3 | 127.0 | 10.4 | 252.9 | 203.3 | 185.6 |
| Queue Delay | 0.0 | 0.4 | 0.8 | 0.9 | 0.0 | 0.0 | 0.0 |
| Total Delay | 79.6 | 12.6 | 127.8 | 11.3 | 252.9 | 203.3 | 185.6 |
| Queue Length 50th (ft) | 201 | 211 | ~499 | 25 | ~571 | ~512 | ~450 |
| Queue Length 95th (ft) | #375 | 255 | #595 | 167 | #793 | #747 | #671 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 361 | 2924 | 1623 | 927 | 466 | 485 | 472 |
| Starvation Cap Reductn | 0 | 540 | 318 | 56 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.98 | 0.74 | 1.50 | 0.83 | 1.47 | 1.36 | 1.32 |

### 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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 809 | 365 | 277 | 907 | 0 | 0 | 0 | 0 | 350 | 0 | 586 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 879 | 397 | 301 | 986 | 0 | 0 | 0 | 0 | 380 | 0 | 637 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 986 | | | 1276 | | | 2786 | 2467 | 879 | 2467 | 2864 | 986 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 986 | | | 1276 | | | 2786 | 2467 | 879 | 2467 | 2864 | 986 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.6 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 4.0 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 43 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 709 | | | 524 | | | 0 | 13 | 349 | 8 | 7 | 303 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 879 | 397 | 301 | 986 | 1017 |
| Volume Left | 0 | 0 | 301 | 0 | 380 |
| Volume Right | 0 | 397 | 0 | 0 | 637 |
| cSH | 1700 | 1700 | 524 | 1700 | 20 |
| Volume to Capacity | 0.52 | 0.23 | 0.57 | 0.58 | 50.46 |
| Queue Length 95th (ft) | 0 | 0 | 90 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 20.7 | 0.0 | Err |
| Lane LOS | | | C | | F |
| Approach Delay (s) | 0.0 | | 4.8 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2843.0 | | |
| Intersection Capacity Utilization | 176.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 740 | 419 | 0 | 0 | 768 | 141 | 416 | 0 | 501 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 804 | 455 | 0 | 0 | 835 | 153 | 452 | 0 | 545 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 988 | | | 455 | | | 2976 | 3052 | 455 | 3520 | 2976 | 911 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 988 | | | 455 | | | 2976 | 3052 | 455 | 3520 | 2976 | 911 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 11 | 0 | 0 | 100 |
| cM capacity (veh/h) | 688 | | | 1116 | | | 0 | 0 | 609 | 0 | 0 | 335 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 804 | 455 | 988 | 997 |
| Volume Left | 804 | 0 | 0 | 452 |
| Volume Right | 0 | 0 | 153 | 545 |
| cSH | 688 | 1700 | 1700 | 0 |
| Volume to Capacity | 1.17 | 0.27 | 0.58 | Err |
| Queue Length 95th (ft) | 653 | 0 | 0 | Err |
| Control Delay (s) | 113.3 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 72.4 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 176.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 770 | 1965 | 0 | 0 | 1943 | 551 | 403 | 0 | 741 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 837 | 2136 | 0 | 0 | 2112 | 599 | 438 | 0 | 805 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2711 | | | 2136 | | | 6221 | 6521 | 2136 | 7027 | 6221 | 2411 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2711 | | | 2136 | | | 6221 | 6521 | 2136 | 7027 | 6221 | 2411 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 147 | | | 257 | | | 0 | 0 | 63 | 0 | 0 | 43 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 837 | 2136 | 2711 | 1243 |
| Volume Left | 837 | 0 | 0 | 438 |
| Volume Right | 0 | 0 | 599 | 805 |
| cSH | 147 | 1700 | 1700 | 0 |
| Volume to Capacity | 5.68 | 1.26 | 1.59 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 2164.4 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 609.4 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 384.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 2075 | 1092 | 703 | 2158 | 597 | 581 | 549 |
| v/c Ratio | 1.41 | 1.13 | 0.91 | 0.89 | 1.58 | 1.48 | 1.40 |
| Control Delay | 217.8 | 88.9 | 59.1 | 20.9 | 305.9 | 259.3 | 223.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 46.1 | 0.0 | 0.0 | 0.0 |
| Total Delay | 217.8 | 88.9 | 59.1 | 67.0 | 305.9 | 259.3 | 223.6 |
| Queue Length 50th (ft) | ~1050 | ~670 | 248 | 592 | ~632 | ~581 | ~505 |
| Queue Length 95th (ft) | #1189 | #926 | #347 | 733 | #861 | #821 | #731 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1470 | 969 | 800 | 2414 | 377 | 392 | 393 |
| Starvation Cap Reductn | 0 | 0 | 0 | 474 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.41 | 1.13 | 0.88 | 1.11 | 1.58 | 1.48 | 1.40 |

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.

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 691 | 2165 | 1655 | 772 | 723 | 705 | 656 |
| v/c Ratio | 1.76 | 0.71 | 0.99 | 0.86 | 1.55 | 1.44 | 1.38 |
| Control Delay | 377.5 | 13.9 | 50.9 | 17.7 | 285.9 | 234.5 | 209.0 |
| Queue Delay | 0.0 | 0.9 | 39.3 | 2.6 | 0.0 | 0.0 | 0.0 |
| Total Delay | 377.5 | 14.9 | 90.2 | 20.3 | 285.9 | 234.5 | 209.0 |
| Queue Length 50th (ft) | ~591 | 284 | 339 | 79 | ~616 | ~565 | ~488 |
| Queue Length 95th (ft) | #802 | 339 | #452 | #350 | #843 | #805 | #712 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 393 | 3067 | 1672 | 899 | 466 | 490 | 476 |
| Starvation Cap Reductn | 0 | 565 | 389 | 57 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.76 | 0.87 | 1.29 | 0.92 | 1.55 | 1.44 | 1.38 |

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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 994 | 286 | 290 | 714 | 0 | 0 | 0 | 0 | 628 | 0 | 441 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 1080 | 311 | 315 | 776 | 0 | 0 | 0 | 0 | 683 | 0 | 479 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 776 | | | 1391 | | | 2727 | 2487 | 1080 | 2487 | 2798 | 776 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 776 | | | 1391 | | | 2727 | 2487 | 1080 | 2487 | 2798 | 776 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 36 | | | 0 | 100 | 100 | 0 | 100 | 0 |
| cM capacity (veh/h) | 849 | | | 492 | | | 0 | 11 | 267 | 9 | 7 | 394 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 1080 | 311 | 315 | 776 | 1162 |
| Volume Left | 0 | 0 | 315 | 0 | 683 |
| Volume Right | 0 | 311 | 0 | 0 | 479 |
| cSH | 1700 | 1700 | 492 | 1700 | 15 |
| Volume to Capacity | 0.64 | 0.18 | 0.64 | 0.46 | 78.31 |
| Queue Length 95th (ft) | 0 | 0 | 111 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 24.5 | 0.0 | Err |
| Lane LOS | | | C | | F |
| Approach Delay (s) | 0.0 | | 7.1 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3190.0 | | |
| Intersection Capacity Utilization | 181.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 546 | 1076 | 0 | 0 | 604 | 415 | 400 | 0 | 337 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 593 | 1170 | 0 | 0 | 657 | 451 | 435 | 0 | 366 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1108 | | | 1170 | | | 3239 | 3464 | 1170 | 3605 | 3239 | 882 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1108 | | | 1170 | | | 3239 | 3464 | 1170 | 3605 | 3239 | 882 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 4 | | | 100 | | | 0 | 100 | 0 | 0 | 100 | 100 |
| cM capacity (veh/h) | 619 | | | 604 | | | 1 | 0 | 237 | 0 | 0 | 348 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 593 | 1170 | 1108 | 801 |
| Volume Left | 593 | 0 | 0 | 435 |
| Volume Right | 0 | 0 | 451 | 366 |
| cSH | 619 | 1700 | 1700 | 1 |
| Volume to Capacity | 0.96 | 0.69 | 0.65 | 578.37 |
| Queue Length 95th (ft) | 335 | 0 | 0 | Err |
| Control Delay (s) | 52.3 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 17.6 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2190.0 | | |
| Intersection Capacity Utilization | 181.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 817 | 1671 | 0 | 0 | 1644 | 413 | 376 | 0 | 305 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 834 | 1705 | 0 | 0 | 1678 | 421 | 384 | 0 | 311 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2099 | | | 1705 | | | 5261 | 5471 | 1705 | 5572 | 5261 | 1888 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2099 | | | 1705 | | | 5261 | 5471 | 1705 | 5572 | 5261 | 1888 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 0 | | | 100 | | | 0 | 0 | 0 | 0 | 0 | 100 |
| cM capacity (veh/h) | 258 | | | 378 | | | 0 | 0 | 114 | 0 | 0 | 89 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 834 | 1705 | 2099 | 695 |
| Volume Left | 834 | 0 | 0 | 384 |
| Volume Right | 0 | 0 | 421 | 311 |
| cSH | 258 | 1700 | 1700 | 0 |
| Volume to Capacity | 3.23 | 1.00 | 1.23 | Err |
| Queue Length 95th (ft) | Err | 0 | 0 | Err |
| Control Delay (s) | 1044.0 | 0.0 | 0.0 | Err |
| Lane LOS | F | | | F |
| Approach Delay (s) | 342.8 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 320.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Lane Group | EBT | EBR | WBL | WBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1533 | 910 | 621 | 1877 | 451 | 434 | 418 |
| v/c Ratio | 1.02 | 0.94 | 0.86 | 0.78 | 1.20 | 1.14 | 1.07 |
| Control Delay | 61.5 | 31.1 | 54.8 | 15.1 | 149.7 | 122.0 | 100.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 17.1 | 0.0 | 0.0 | 0.0 |
| Total Delay | 61.5 | 31.1 | 54.8 | 32.2 | 149.7 | 122.0 | 100.7 |
| Queue Length 50th (ft) | ~621 | 319 | 216 | 430 | ~406 | ~347 | ~301 |
| Queue Length 95th (ft) | #774 | #649 | 279 | 526 | #615 | #567 | #508 |
| Internal Link Dist (ft) | 622 | | | 431 | | 943 | |
| Turn Bay Length (ft) | | | 100 | | 250 | | 250 |
| Base Capacity (vph) | 1499 | 972 | 792 | 2414 | 377 | 382 | 390 |
| Starvation Cap Reductn | 0 | 0 | 0 | 579 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.02 | 0.94 | 0.78 | 1.02 | 1.20 | 1.14 | 1.07 |

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.

## 13: I-15 NB Off Ramp/I-15 NB On Ramp & Central Av. (SR-74)

| Lane Group | EBL | EBT | WBT | WBR | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 440 | 1650 | 1602 | 898 | 627 | 603 | 570 |
| v/c Ratio | 1.08 | 0.54 | 0.96 | 0.96 | 1.38 | 1.26 | 1.20 |
| Control Delay | 101.6 | 11.3 | 44.7 | 32.0 | 211.4 | 159.5 | 135.1 |
| Queue Delay | 0.0 | 0.3 | 43.6 | 12.5 | 0.0 | 0.0 | 0.0 |
| Total Delay | 101.6 | 11.6 | 88.2 | 44.5 | 211.4 | 159.5 | 135.1 |
| Queue Length 50th (ft) | ~281 | 184 | 324 | 175 | ~501 | ~437 | ~377 |
| Queue Length 95th (ft) | #463 | 222 | #428 | #480 | #717 | #663 | #591 |
| Internal Link Dist (ft) | | 431 | 249 | | | 865 | |
| Turn Bay Length (ft) | 200 | | | | 240 | | 240 |
| Base Capacity (vph) | 409 | 3067 | 1672 | 933 | 456 | 479 | 476 |
| Starvation Cap Reductn | 0 | 672 | 395 | 53 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.08 | 0.69 | 1.25 | 1.02 | 1.38 | 1.26 | 1.20 |

### 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.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 844 | 166 | 242 | 410 | 0 | 0 | 0 | 0 | 497 | 0 | 242 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 879 | 173 | 252 | 427 | 0 | 0 | 0 | 0 | 518 | 0 | 252 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | 8 |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 427 | | | 1052 | | | 1936 | 1810 | 879 | 1810 | 1983 | 427 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 427 | | | 1052 | | | 1936 | 1810 | 879 | 1810 | 1983 | 427 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 61 | | | 100 | 100 | 100 | 0 | 100 | 60 |
| cM capacity (veh/h) | 1143 | | | 654 | | | 21 | 49 | 350 | 43 | 38 | 625 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 879 | 173 | 252 | 427 | 770 |
| Volume Left | 0 | 0 | 252 | 0 | 518 |
| Volume Right | 0 | 173 | 0 | 0 | 252 |
| cSH | 1700 | 1700 | 654 | 1700 | 62 |
| Volume to Capacity | 0.52 | 0.10 | 0.39 | 0.25 | 12.42 |
| Queue Length 95th (ft) | 0 | 0 | 45 | 0 | Err |
| Control Delay (s) | 0.0 | 0.0 | 13.9 | 0.0 | Err |
| Lane LOS | | | B | | F |
| Approach Delay (s) | 0.0 | | 5.2 | | Err |
| Approach LOS | | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3079.0 | | |
| Intersection Capacity Utilization | 117.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 536 | 805 | 0 | 0 | 420 | 20 | 233 | 0 | 238 | 0 | 0 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 576 | 866 | 0 | 0 | 452 | 22 | 251 | 0 | 256 | 0 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 473 | | | 866 | | | 2481 | 2491 | 866 | 2737 | 2481 | 462 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 473 | | | 866 | | | 2481 | 2491 | 866 | 2737 | 2481 | 462 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 47 | | | 100 | | | 0 | 100 | 28 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1089 | | | 786 | | | 12 | 14 | 354 | 2 | 14 | 604 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | NB 1 |
|---|---|---|---|---|
| Volume Total | 576 | 866 | 473 | 506 |
| Volume Left | 576 | 0 | 0 | 251 |
| Volume Right | 0 | 0 | 22 | 256 |
| cSH | 1089 | 1700 | 1700 | 23 |
| Volume to Capacity | 0.53 | 0.51 | 0.28 | 22.26 |
| Queue Length 95th (ft) | 80 | 0 | 0 | Err |
| Control Delay (s) | 12.0 | 0.0 | 0.0 | Err |
| Lane LOS | B | | | F |
| Approach Delay (s) | 4.8 | | 0.0 | Err |
| Approach LOS | | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2094.1 | | |
| Intersection Capacity Utilization | 117.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

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