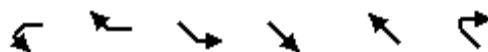


I-85/I-385 Interchange Improvements
2015 Alternate 4A AM










21: US 276 &



| Movement | WBL | WBR | SEL | SET | NWT | NWR |
|-----------------------------------|-------|-------|------|----------------------|------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 125 | 20 | 74 | 1555 | 1906 | 72 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 139 | 22 | 82 | 1728 | 2118 | 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) | | | | | 1013 | |
| pX, platoon unblocked | 0.50 | 0.50 | 0.50 | | | |
| vC, conflicting volume | 3186 | 1099 | 2198 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 3371 | 0 | 1401 | | | |
| tC, single (s) | 6.9 | 7.0 | 4.2 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 0 | 96 | 65 | | | |
| cM capacity (veh/h) | 2 | 539 | 235 | | | |
| Direction, Lane # | WB 1 | SE 1 | SE 2 | SE 3 | NW 1 | NW 2 |
| Volume Total | 161 | 82 | 864 | 864 | 1412 | 786 |
| Volume Left | 139 | 82 | 0 | 0 | 0 | 0 |
| Volume Right | 22 | 0 | 0 | 0 | 0 | 80 |
| cSH | 2 | 235 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 77.97 | 0.35 | 0.51 | 0.51 | 0.83 | 0.46 |
| Queue Length 95th (ft) | Err | 37 | 0 | 0 | 0 | 0 |
| Control Delay (s) | Err | 28.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | F | D | | | | |
| Approach Delay (s) | Err | 1.3 | | | 0.0 | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | 387.0 | | | | |
| Intersection Capacity Utilization | | 76.3% | | ICU Level of Service | | D |
| Analysis Period (min) | | 15 | | | | |












I-85/I-385 Interchange Improvements
2015 Alternate 4A AM

22: US 276 & St Josephs Dr

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | SET | SER | NWL | NWT | NEL | NER |
| Lane Configurations |  | | |  |  | |
| Volume (veh/h) | 1419 | 261 | 264 | 1525 | 453 | 98 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 1577 | 290 | 293 | 1694 | 503 | 109 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | 860 | | |
| pX, platoon unblocked | | | | | 0.46 | |
| vC, conflicting volume | | | 1867 | | 3156 | 933 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 1867 | | 3339 | 933 |
| tC, single (s) | | | 4.2 | | 6.9 | 7.0 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 4 | | 0 | 58 |
| cM capacity (veh/h) | | | 307 | | 0 | 262 |
| Direction, Lane # | SE 1 | SE 2 | NW 1 | NW 2 | NE 1 | |
| Volume Total | 1051 | 816 | 858 | 1130 | 612 | |
| Volume Left | 0 | 0 | 293 | 0 | 503 | |
| Volume Right | 0 | 290 | 0 | 0 | 109 | |
| cSH | 1700 | 1700 | 307 | 1700 | 0 | |
| Volume to Capacity | 0.62 | 0.48 | 0.96 | 0.66 | 4235.26 | |
| Queue Length 95th (ft) | 0 | 0 | 242 | 0 | Err | |
| Control Delay (s) | 0.0 | 0.0 | 78.3 | 0.0 | Err | |
| Lane LOS | | | F | | F | |
| Approach Delay (s) | 0.0 | | 33.8 | | Err | |
| Approach LOS | | | | | F | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1385.6 | | | |
| Intersection Capacity Utilization | | | 138.4% | | ICU Level of Service | H |
| Analysis Period (min) | | | 15 | | | |














I-85/I-385 Interchange Improvements
2015 Alternate 4A AM

29: Rothwell Dr & E Butler Road

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |
| Volume (veh/h) | 6 | 1 | 4 | 1111 | 932 | 27 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 7 | 1 | 4 | 1234 | 1036 | 30 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | 5 | | | | |
| Median type | | | | TWLT | TWLT | |
| Median storage (veh) | | | | 2 | 2 | |
| Upstream signal (ft) | | | | 1176 | 378 | |
| pX, platoon unblocked | 0.93 | 0.86 | 0.86 | | | |
| vC, conflicting volume | 1677 | 533 | 1066 | | | |
| vC1, stage 1 conf vol | 1051 | | | | | |
| vC2, stage 2 conf vol | 626 | | | | | |
| vCu, unblocked vol | 937 | 141 | 758 | | | |
| tC, single (s) | 6.9 | 7.0 | 4.2 | | | |
| tC, 2 stage (s) | 5.9 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 98 | 100 | 99 | | | |
| cM capacity (veh/h) | 349 | 752 | 716 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 |
| Volume Total | 8 | 4 | 617 | 617 | 690 | 375 |
| Volume Left | 7 | 4 | 0 | 0 | 0 | 0 |
| Volume Right | 1 | 0 | 0 | 0 | 0 | 30 |
| cSH | 407 | 716 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.02 | 0.01 | 0.36 | 0.36 | 0.41 | 0.22 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 14.7 | 10.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | B | | | | |
| Approach Delay (s) | 14.7 | 0.0 | | | 0.0 | |
| Approach LOS | B | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 40.7% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |




















I-85/I-385 Interchange Improvements
2015 Alternate 4A AM

32: New Commerce Ct & E Butler Road

| |  |  |  |  |  |  |
|-----------------------------------|---|---|--|---|--|--|
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |   | |   |   |
| Volume (veh/h) | 53 | 58 | 1479 | 21 | 36 | 1334 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 59 | 64 | 1643 | 23 | 40 | 1482 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | 371 | | | |
| pX, platoon unblocked | 0.81 | 0.81 | | | 0.81 | |
| vC, conflicting volume | 2476 | 833 | | | 1667 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2350 | 312 | | | 1346 | |
| tC, single (s) | 6.9 | 7.0 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 0 | 88 | | | 90 | |
| cM capacity (veh/h) | 21 | 544 | | | 397 | |
| Direction, Lane # | WB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
| Volume Total | 123 | 1096 | 571 | 40 | 741 | 741 |
| Volume Left | 59 | 0 | 0 | 40 | 0 | 0 |
| Volume Right | 64 | 0 | 23 | 0 | 0 | 0 |
| cSH | 42 | 1700 | 1700 | 397 | 1700 | 1700 |
| Volume to Capacity | 2.94 | 0.64 | 0.34 | 0.10 | 0.44 | 0.44 |
| Queue Length 95th (ft) | 339 | 0 | 0 | 8 | 0 | 0 |
| Control Delay (s) | 1076.8 | 0.0 | 0.0 | 15.1 | 0.0 | 0.0 |
| Lane LOS | F | | | C | | |
| Approach Delay (s) | 1076.8 | 0.0 | | 0.4 | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | 40.3 | | | | |
| Intersection Capacity Utilization | | 54.7% | | ICU Level of Service | | A |
| Analysis Period (min) | | 15 | | | | |

I-85/I-385 Interchange Improvements
2015 Alternate 4A AM

33: E Butler Road & Brookfield Pkwy

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SET | SER | NWL | NWT | NWR |
| Lane Configurations |  |  | | |  | | |  |  | |  |  |
| Volume (veh/h) | 96 | 1420 | 21 | 17 | 1337 | 18 | 1 | 0 | 13 | 20 | 0 | 10 |
| 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) | 107 | 1578 | 23 | 19 | 1486 | 20 | 1 | 0 | 14 | 22 | 0 | 11 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 939 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.81 | | | 0.81 | 0.81 | | 0.81 | 0.81 | 0.81 |
| vC, conflicting volume | 1506 | | | 1601 | | | 2547 | 3348 | 753 | 2598 | 3346 | 801 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1506 | | | 1282 | | | 2443 | 3427 | 753 | 2506 | 3425 | 299 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.6 | 7.0 | 7.6 | 6.6 | 7.0 |
| 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 % | 75 | | | 96 | | | 88 | 100 | 96 | 0 | 100 | 98 |
| cM capacity (veh/h) | 426 | | | 424 | | | 10 | 4 | 346 | 8 | 4 | 561 |
| Direction, Lane # | NB 1 | NB 2 | NB 3 | SB 1 | SB 2 | SE 1 | SE 2 | NW 1 | NW 2 | | | |
| Volume Total | 107 | 1052 | 549 | 762 | 763 | 1 | 14 | 22 | 11 | | | |
| Volume Left | 107 | 0 | 0 | 19 | 0 | 1 | 0 | 22 | 0 | | | |
| Volume Right | 0 | 0 | 23 | 0 | 20 | 0 | 14 | 0 | 11 | | | |
| cSH | 426 | 1700 | 1700 | 424 | 1700 | 10 | 346 | 8 | 561 | | | |
| Volume to Capacity | 0.25 | 0.62 | 0.32 | 0.04 | 0.45 | 0.12 | 0.04 | 2.64 | 0.02 | | | |
| Queue Length 95th (ft) | 24 | 0 | 0 | 3 | 0 | 8 | 3 | 97 | 2 | | | |
| Control Delay (s) | 16.2 | 0.0 | 0.0 | 1.4 | 0.0 | 423.0 | 15.9 | 1607.7 | 11.6 | | | |
| Lane LOS | C | | | A | | F | C | F | B | | | |
| Approach Delay (s) | 1.0 | | | 0.7 | | 44.9 | | 1075.7 | | | | |
| Approach LOS | | | | | | E | | F | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 12.0 | | | | | | | | | |
| Intersection Capacity Utilization | | | 94.2% | | ICU Level of Service | | | | F | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |