

Year 2020 No-Build
1: Trailwood Village Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR | ø2 | ø3 | ø4 | ø5 | ø7 | ø8 |
|----------------------------|-------|-------|-------|-------|-------|-------|------|-----|-----|-----|-----|-----|
| Lane Configurations | ↑↑ | | ↙ | ↑↑ | ↘ | ↗ | | | | | | |
| Volume (vph) | 640 | 76 | 19 | 1845 | 140 | 49 | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | | | | | | |
| Frt | 0.984 | | | | 0.995 | 0.850 | | | | | | |
| Flt Protected | | | 0.950 | | 0.954 | | | | | | | |
| Satd. Flow (prot) | 3483 | 0 | 1770 | 3539 | 1768 | 1504 | | | | | | |
| Flt Permitted | | | 0.950 | | 0.954 | | | | | | | |
| Satd. Flow (perm) | 3483 | 0 | 1770 | 3539 | 1768 | 1504 | | | | | | |
| Right Turn on Red | | Yes | | | | Yes | | | | | | |
| Satd. Flow (RTOR) | 14 | | | | 1 | 56 | | | | | | |
| Link Speed (mph) | 40 | | | 40 | 30 | | | | | | | |
| Link Distance (ft) | 225 | | | 355 | 1092 | | | | | | | |
| Travel Time (s) | 3.8 | | | 6.1 | 24.8 | | | | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | | | |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | | | | | | |
| Adj. Flow (vph) | 814 | 97 | 24 | 2346 | 178 | 62 | | | | | | |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 911 | 0 | 24 | 2346 | 184 | 56 | | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | | | | | | |
| Median Width(ft) | 40 | | | 40 | 12 | | | | | | | |
| Link Offset(ft) | 0 | | | 0 | 0 | | | | | | | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 | | | | | | |
| Number of Detectors | 2 | | 1 | 2 | 1 | 1 | | | | | | |
| Detector Template | Thru | | Left | Thru | Left | Right | | | | | | |
| Leading Detector (ft) | 100 | | 20 | 100 | 20 | 20 | | | | | | |
| Trailing Detector (ft) | 0 | | 0 | 0 | 0 | 0 | | | | | | |
| Detector 1 Position(ft) | 0 | | 0 | 0 | 0 | 0 | | | | | | |
| Detector 1 Size(ft) | 6 | | 20 | 6 | 20 | 20 | | | | | | |
| Detector 1 Type | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| Detector 2 Position(ft) | 94 | | | 94 | | | | | | | | |
| Detector 2 Size(ft) | 6 | | | 6 | | | | | | | | |
| Detector 2 Type | Cl+Ex | | | Cl+Ex | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | 0.0 | | | 0.0 | | | | | | | | |
| Turn Type | NA | | Prot | NA | NA | Perm | | | | | | |
| Protected Phases | 2 7 | | 1 | 6 | 3 8 | | 2 | 3 | 4 | 5 | 7 | 8 |
| Permitted Phases | | | | | | 3 8 | | | | | | |
| Detector Phase | 2 7 | | 1 | 6 | 3 8 | 3 8 | | | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | 3.0 | 2.0 | | | 10.0 | 1.0 | 5.0 | 3.0 | 1.0 | 5.0 |

Year 2020 No-Build
1: Trailwood Village Dr. & Kingwood Dr.

AM Peak Hour



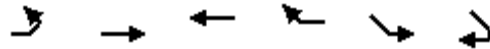
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR | ø2 | ø3 | ø4 | ø5 | ø7 | ø8 |
|-------------------------|-------|-----|-------|-------|-------|------|-------|------|------|------|------|------|
| Minimum Split (s) | | | 10.0 | 22.0 | | | 29.0 | 14.5 | 11.0 | 9.0 | 7.0 | 11.0 |
| Total Split (s) | | | 30.0 | 60.0 | | | 60.0 | 25.0 | 29.0 | 30.0 | 29.0 | 25.0 |
| Total Split (%) | | | 20.8% | 41.7% | | | 42% | 17% | 20% | 21% | 20% | 17% |
| Maximum Green (s) | | | 24.0 | 54.0 | | | 54.0 | 19.0 | 23.0 | 24.0 | 23.0 | 19.0 |
| Yellow Time (s) | | | 4.0 | 4.0 | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | 2.0 | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | 0.0 | 0.0 | | | | | | | | |
| Total Lost Time (s) | | | 6.0 | 6.0 | | | | | | | | |
| Lead/Lag | | | Lead | Lag | | | Lag | | | Lead | | |
| Lead-Lag Optimize? | | | Yes | Yes | | | Yes | | | Yes | | |
| Vehicle Extension (s) | | | 3.0 | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | | | None | C-Max | | | C-Max | None | None | None | None | None |
| Walk Time (s) | | | | 5.0 | | | 5.0 | | | | | |
| Flash Dont Walk (s) | | | | 11.0 | | | 11.0 | | | | | |
| Pedestrian Calls (#/hr) | | | | 0 | | | 0 | | | | | |
| Act Effect Green (s) | 100.7 | | 7.5 | 74.0 | 19.0 | 19.0 | | | | | | |
| Actuated g/C Ratio | 0.70 | | 0.05 | 0.51 | 0.13 | 0.13 | | | | | | |
| v/c Ratio | 0.37 | | 0.26 | 1.29 | 0.79 | 0.23 | | | | | | |
| Control Delay | 1.4 | | 72.0 | 166.3 | 83.3 | 15.7 | | | | | | |
| Queue Delay | 0.0 | | 0.0 | 0.8 | 49.8 | 0.0 | | | | | | |
| Total Delay | 1.5 | | 72.0 | 167.0 | 133.1 | 15.7 | | | | | | |
| LOS | A | | E | F | F | B | | | | | | |
| Approach Delay | 1.5 | | | 166.1 | 105.7 | | | | | | | |
| Approach LOS | A | | | F | F | | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 119.4 Intersection LOS: F
 Intersection Capacity Utilization 79.9% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Trailwood Village Dr. & Kingwood Dr.





| Lane Group | EBL | EBT | WBT | WBR | SEL | SER |
|----------------------------|------|------|------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Link Speed (mph) | | 40 | 40 | | 40 | |
| Link Distance (ft) | | 799 | 656 | | 804 | |
| Travel Time (s) | | 13.6 | 11.2 | | 13.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 70 | 70 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 6.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
4: Green Oak Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 40 | 636 | 62 | 0 | 0 | 0 | 0 | 104 | 25 | 100 | 40 | 0 |
| Ideal Flow (vphp) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.987 | | | | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3493 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3493 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | | | | | 159 | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | 30 | |
| Link Distance (ft) | | 2489 | | | 270 | | | 515 | | | 89 | |
| Travel Time (s) | | 42.4 | | | 4.6 | | | 11.7 | | | 2.0 | |
| 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 |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% |
| Adj. Flow (vph) | 51 | 809 | 79 | 0 | 0 | 0 | 0 | 132 | 32 | 127 | 51 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 51 | 888 | 0 | 0 | 0 | 0 | 0 | 132 | 32 | 127 | 51 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | | | | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | | | | | | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | | | | | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | | | | | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | | | | | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | | | | | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | | | | | | NA | Perm | Prot | NA | |
| Protected Phases | 15 | 2 | | | | | | 8 | | 1 4 | 4 | |
| Permitted Phases | | | | | | | | | | 8 | | |

| Lane Group | ø1 | ø6 |
|----------------------------|----|----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |

Year 2020 No-Build
4: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

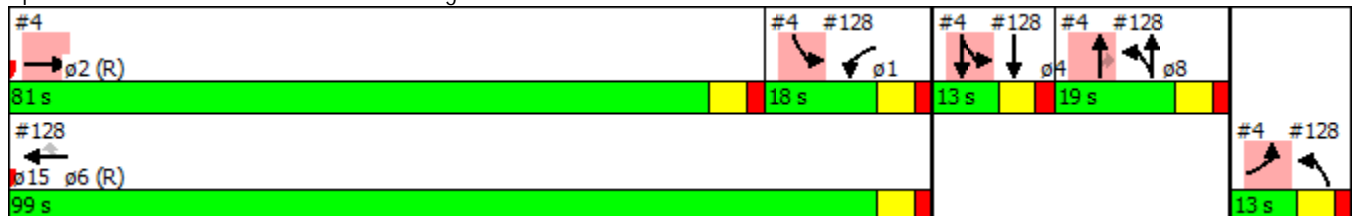


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-----|-----|-----|-----|-----|-------|-------|------|------|-----|
| Detector Phase | 15 | 2 | | | | | | 8 | 8 | 14 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 4.0 | | | | | | 5.0 | 5.0 | | 5.0 | |
| Minimum Split (s) | 11.0 | 20.0 | | | | | | 19.0 | 19.0 | | 11.0 | |
| Total Split (s) | 13.0 | 81.0 | | | | | | 19.0 | 19.0 | | 13.0 | |
| Total Split (%) | 9.0% | 56.3% | | | | | | 13.2% | 13.2% | | 9.0% | |
| Maximum Green (s) | 7.0 | 75.0 | | | | | | 13.0 | 13.0 | | 7.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | 4.0 | | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | 2.0 | 2.0 | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | 6.0 | 6.0 | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lag | Lag | | Lead | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | Yes | | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | 3.0 | | 3.0 | |
| Recall Mode | None | C-Max | | | | | | None | None | | None | |
| Walk Time (s) | | 4.0 | | | | | | 6.0 | 6.0 | | | |
| Flash Dont Walk (s) | | 10.0 | | | | | | 7.0 | 7.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | 0 | 0 | | | |
| Act Effct Green (s) | 6.8 | 75.6 | | | | | | 12.5 | 12.5 | 25.0 | 7.0 | |
| Actuated g/C Ratio | 0.05 | 0.52 | | | | | | 0.09 | 0.09 | 0.17 | 0.05 | |
| v/c Ratio | 0.61 | 0.48 | | | | | | 0.81 | 0.11 | 0.41 | 0.57 | |
| Control Delay | 77.1 | 38.3 | | | | | | 98.8 | 0.8 | 24.0 | 42.6 | |
| Queue Delay | 18.8 | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 95.9 | 38.3 | | | | | | 98.8 | 0.8 | 24.0 | 42.6 | |
| LOS | F | D | | | | | | F | A | C | D | |
| Approach Delay | | 41.4 | | | | | | 79.7 | | | 29.4 | |
| Approach LOS | | D | | | | | | E | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 44.6
 Intersection LOS: D
 Intersection Capacity Utilization 106.7%
 ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 4: Green Oak Dr. & Kingwood Dr.



| Lane Group | ø1 | ø6 |
|-----------------------------|------|-------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 5.0 | 4.0 |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 18.0 | 99.0 |
| Total Split (%) | 13% | 69% |
| Maximum Green (s) | 12.0 | 93.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | None | C-Max |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
6: Northpark Dr. & Sorters

AM Peak Hour

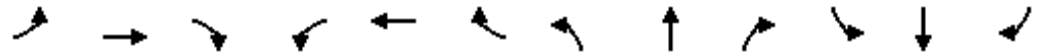


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 93 | 120 | 71 | 0 | 362 | 248 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | 0.950 | | | | | 0.971 |
| Satd. Flow (prot) | 1770 | 1583 | 1863 | 0 | 0 | 1809 |
| Flt Permitted | 0.950 | | | | | 0.971 |
| Satd. Flow (perm) | 1770 | 1583 | 1863 | 0 | 0 | 1809 |
| Link Speed (mph) | 40 | | 30 | | | 30 |
| Link Distance (ft) | 1488 | | 70 | | | 496 |
| Travel Time (s) | 25.4 | | 1.6 | | | 11.3 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 114 | 147 | 87 | 0 | 445 | 305 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 114 | 147 | 87 | 0 | 0 | 750 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 0 | | | 0 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 56.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

8: Lake Houston Parkway & Northpark Dr.



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|--------|-----|-------|-------|-----|-------|-------|-----|------|-------|-----|
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.0 | |
| Total Split (s) | 15.0 | 37.0 | | 39.0 | 61.0 | | 37.0 | 58.0 | | 10.0 | 31.0 | |
| Total Split (%) | 10.4% | 25.7% | | 27.1% | 42.4% | | 25.7% | 40.3% | | 6.9% | 21.5% | |
| Maximum Green (s) | 9.0 | 31.0 | | 33.0 | 55.0 | | 31.0 | 52.0 | | 4.0 | 25.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | C-Max | | None | C-Max | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 8.1 | 35.4 | | 28.6 | 58.2 | | 29.0 | 58.0 | | 4.0 | 27.0 | |
| Actuated g/C Ratio | 0.06 | 0.25 | | 0.20 | 0.40 | | 0.20 | 0.40 | | 0.03 | 0.19 | |
| v/c Ratio | 0.47 | 0.90dr | | 0.86 | 0.51 | | 0.88 | 0.20 | | 0.13 | 0.74 | |
| Control Delay | 81.3 | 38.8 | | 66.0 | 27.5 | | 70.5 | 13.8 | | 71.3 | 53.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 81.3 | 38.8 | | 66.0 | 27.5 | | 70.5 | 13.8 | | 71.3 | 53.4 | |
| LOS | F | D | | E | C | | E | B | | E | D | |
| Approach Delay | | 41.0 | | | 38.7 | | | 52.8 | | | 53.8 | |
| Approach LOS | | D | | | D | | | D | | | D | |

Intersection Summary

Area Type: Other

Cycle Length: 144

Actuated Cycle Length: 144

Offset: 70 (49%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

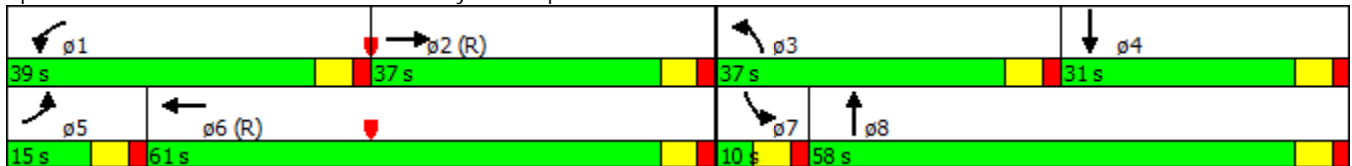
Intersection Signal Delay: 45.4 Intersection LOS: D

Intersection Capacity Utilization 89.3% ICU Level of Service E

Analysis Period (min) 15

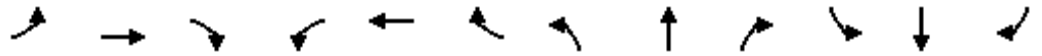
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 8: Lake Houston Parkway & Northpark Dr.



Year 2020 No-Build
11: Woodland Hills & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.3 | | 10.0 | 22.3 | |
| Total Split (s) | 10.0 | 67.0 | | 20.0 | 79.0 | | 25.0 | 38.0 | | 19.0 | 32.0 | |
| Total Split (%) | 6.8% | 45.9% | | 13.7% | 54.1% | | 17.1% | 26.0% | | 13.0% | 21.9% | |
| Maximum Green (s) | 4.0 | 61.0 | | 14.0 | 73.0 | | 19.0 | 32.0 | | 13.0 | 26.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | C-Max | | None | C-Max | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effect Green (s) | 68.1 | 64.1 | | 83.0 | 75.0 | | 19.0 | 32.6 | | 12.4 | 26.0 | |
| Actuated g/C Ratio | 0.47 | 0.44 | | 0.57 | 0.51 | | 0.13 | 0.22 | | 0.08 | 0.18 | |
| v/c Ratio | 0.45 | 0.59 | | 0.66 | 1.02 | | 1.05 | 0.56 | | 0.77 | 0.78 | |
| Control Delay | 30.9 | 31.5 | | 25.9 | 60.3 | | 115.8 | 44.0 | | 96.3 | 60.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 30.9 | 31.5 | | 25.9 | 60.3 | | 115.8 | 44.0 | | 96.3 | 60.0 | |
| LOS | C | C | | C | E | | F | D | | F | E | |
| Approach Delay | | 31.4 | | | 56.7 | | | 80.5 | | | 66.7 | |
| Approach LOS | | C | | | E | | | F | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 146
 Actuated Cycle Length: 146
 Offset: 52 (36%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 57.7
 Intersection LOS: E
 Intersection Capacity Utilization 96.2%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 11: Woodland Hills & Northpark Dr.



Year 2020 No-Build
13: Kingwood Dr. & Mills Branch

AM Peak Hour



| Lane Group | EBL | EBR | NEL | NET | SWT | SWR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 32 | 0 | 225 | 44 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | 0.960 | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 3398 | 0 | 0 |
| Flt Permitted | 0.950 | | | 0.960 | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 3398 | 0 | 0 |
| Link Speed (mph) | 30 | | | 40 | 40 | |
| Link Distance (ft) | 199 | | | 1077 | 310 | |
| Travel Time (s) | 4.5 | | | 18.4 | 5.3 | |
| Peak Hour Factor | 0.57 | 0.92 | 0.80 | 0.79 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 63 | 0 | 318 | 63 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 63 | 0 | 0 | 381 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 40 | | | 0 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Sign Control | Stop | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
14: US 59 SBFR & Northpark Dr.

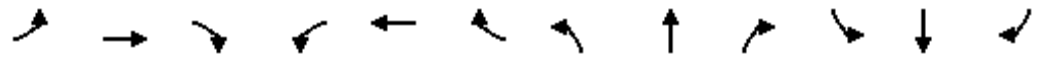
AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|---------|--------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑↑ | | ↔↔ | ↑↑ | | | | | ↔ | ↑↑↑↑ | ↔ |
| Volume (vph) | 0 | 228 | 192 | 1764 | 333 | 0 | 0 | 0 | 0 | 452 | 311 | 124 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 150 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 2 | 2 | | 0 | 0 | | 0 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.86 | 0.86 | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.86 | 0.81 | 0.86 |
| Frt | | 0.931 | | | | | | | | | 0.997 | 0.850 |
| Flt Protected | | | | 0.950 | | | | | | 0.950 | 0.980 | |
| Satd. Flow (prot) | 0 | 5966 | 0 | 3433 | 3539 | 0 | 0 | 0 | 0 | 1522 | 4423 | 1362 |
| Flt Permitted | | | | 0.950 | | | | | | 0.950 | 0.980 | |
| Satd. Flow (perm) | 0 | 5966 | 0 | 3433 | 3539 | 0 | 0 | 0 | 0 | 1522 | 4423 | 1362 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 33 | | | | | | | | | 2 | 249 |
| Link Speed (mph) | | 40 | | | 30 | | | 55 | | | 55 | |
| Link Distance (ft) | | 3907 | | | 296 | | | 398 | | | 255 | |
| Travel Time (s) | | 66.6 | | | 6.7 | | | 4.9 | | | 3.2 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 280 | 236 | 2167 | 409 | 0 | 0 | 0 | 0 | 555 | 382 | 152 |
| Shared Lane Traffic (%) | | | | | | | | | | 50% | | 10% |
| Lane Group Flow (vph) | 0 | 516 | 0 | 2167 | 409 | 0 | 0 | 0 | 0 | 277 | 675 | 137 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 2 | | 1 | 2 | | | | | 1 | 2 | 1 |
| Detector Template | | Thru | | Left | Thru | | | | | Left | Thru | Right |
| Leading Detector (ft) | | 100 | | 20 | 100 | | | | | 20 | 100 | 20 |
| Trailing Detector (ft) | | 0 | | 0 | 0 | | | | | 0 | 0 | 0 |
| Detector 1 Position(ft) | | 0 | | 0 | 0 | | | | | 0 | 0 | 0 |
| Detector 1 Size(ft) | | 6 | | 20 | 6 | | | | | 20 | 6 | 20 |
| Detector 1 Type | | Cl+Ex | | Cl+Ex | Cl+Ex | | | | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | 0.0 | |
| Turn Type | | NA | | Prot | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 2 | | 1 11 21 | 1 2 11 | | | | | | 3 4 | |
| Permitted Phases | | | | | | | | | | 3 4 | | 3 4 |

Year 2020 No-Build
 14: US 59 SBFR & Northpark Dr.

AM Peak Hour

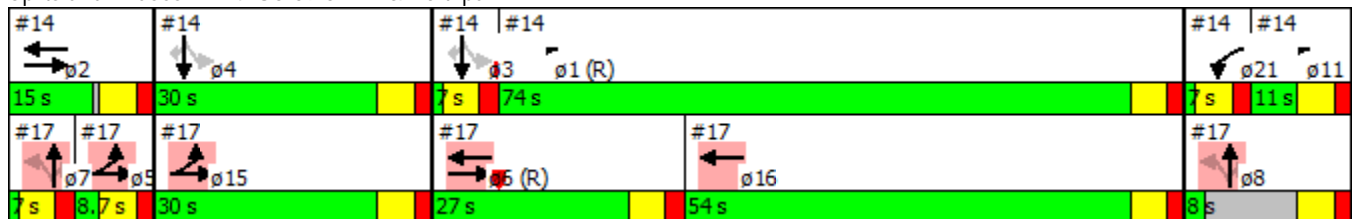


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|--------|-----|---------|--------|-----|-----|-----|-----|------|------|------|
| Detector Phase | | 2 | | 1 11 21 | 1 2 11 | | | | | 3 4 | 3 4 | 3 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | | | | | | | | | | |
| Minimum Split (s) | | 14.0 | | | | | | | | | | |
| Total Split (s) | | 15.0 | | | | | | | | | | |
| Total Split (%) | | 10.4% | | | | | | | | | | |
| Maximum Green (s) | | 9.0 | | | | | | | | | | |
| Yellow Time (s) | | 4.0 | | | | | | | | | | |
| All-Red Time (s) | | 2.0 | | | | | | | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | | | |
| Recall Mode | | None | | | | | | | | | | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effect Green (s) | | 9.7 | | 86.0 | 88.7 | | | | | 31.0 | 31.0 | 31.0 |
| Actuated g/C Ratio | | 0.07 | | 0.59 | 0.61 | | | | | 0.21 | 0.21 | 0.21 |
| v/c Ratio | | 1.71dr | | 1.06 | 0.19 | | | | | 0.85 | 0.71 | 0.28 |
| Control Delay | | 161.8 | | 51.5 | 1.1 | | | | | 78.2 | 57.4 | 1.4 |
| Queue Delay | | 0.0 | | 16.0 | 0.2 | | | | | 0.0 | 0.0 | 0.0 |
| Total Delay | | 161.8 | | 67.5 | 1.3 | | | | | 78.2 | 57.4 | 1.4 |
| LOS | | F | | E | A | | | | | E | E | A |
| Approach Delay | | 161.8 | | | 57.0 | | | | | | 55.6 | |
| Approach LOS | | F | | | E | | | | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 144.7
 Actuated Cycle Length: 144.7
 Offset: 110 (76%), Referenced to phase 1:WBTL and 6:, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.20
 Intersection Signal Delay: 69.6
 Intersection LOS: E
 Intersection Capacity Utilization 81.1%
 ICU Level of Service D
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: US 59 SBFR & Northpark Dr.



| Lane Group | ø1 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 |
|-------------------------|-------|------|------|------|-------|------|------|------|------|------|------|
| Detector Phase | | | | | | | | | | | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 1.0 | 5.0 | 2.7 | 5.0 | 1.0 | 1.0 | 3.0 | 3.0 | 4.0 | 1.0 |
| Minimum Split (s) | 21.3 | 7.0 | 22.7 | 8.7 | 27.0 | 7.0 | 8.0 | 9.0 | 9.0 | 20.0 | 7.0 |
| Total Split (s) | 74.0 | 7.0 | 30.0 | 8.7 | 27.0 | 7.0 | 8.0 | 11.0 | 30.0 | 54.0 | 7.0 |
| Total Split (%) | 51% | 5% | 21% | 6% | 19% | 5% | 6% | 8% | 21% | 37% | 5% |
| Maximum Green (s) | 68.0 | 1.0 | 24.0 | 2.7 | 21.0 | 1.0 | 2.0 | 5.0 | 24.0 | 48.0 | 1.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | |
| Lead/Lag | Lag | Lead | | Lag | Lead | Lead | | Lag | | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | C-Max | None | None | None | C-Max | None | None | None | None | None | None |
| Walk Time (s) | | | 5.0 | | 5.0 | | | | | | |
| Flash Dont Walk (s) | | | 11.0 | | 16.0 | | | | | | |
| Pedestrian Calls (#/hr) | | | 0 | | 0 | | | | | | |
| Act Effect Green (s) | | | | | | | | | | | |
| Actuated g/C Ratio | | | | | | | | | | | |
| v/c Ratio | | | | | | | | | | | |
| Control Delay | | | | | | | | | | | |
| Queue Delay | | | | | | | | | | | |
| Total Delay | | | | | | | | | | | |
| LOS | | | | | | | | | | | |
| Approach Delay | | | | | | | | | | | |
| Approach LOS | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | |

Year 2020 No-Build
17: US 59 NBFR & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|--------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↖↖ | ↑↑ | | | ↑↑↑ | | ↖↖ | ↑↑ | ↖↖ | | | |
| Volume (vph) | 71 | 617 | 0 | 0 | 1823 | 226 | 145 | 126 | 434 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 150 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 0 | | 2 | 2 | | 2 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 1.00 | 0.86 | 0.86 | 0.97 | 0.95 | 0.88 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.983 | | | | 0.850 | | | |
| Fl _t Protected | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 3539 | 0 | 0 | 6299 | 0 | 3433 | 3539 | 2787 | 0 | 0 | 0 |
| Fl _t Permitted | 0.950 | | | | | | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 3539 | 0 | 0 | 6299 | 0 | 3433 | 3539 | 2787 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 32 | | | | 533 | | | |
| Link Speed (mph) | | 30 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 296 | | | 1797 | | | 365 | | | 309 | |
| Travel Time (s) | | 6.7 | | | 27.2 | | | 4.5 | | | 3.8 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 87 | 758 | 0 | 0 | 2239 | 278 | 178 | 155 | 533 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 87 | 758 | 0 | 0 | 2517 | 0 | 178 | 155 | 533 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | | 2 | | 1 | 2 | 1 | | | |
| Detector Template | Left | Thru | | | Thru | | Left | Thru | Right | | | |
| Leading Detector (ft) | 20 | 100 | | | 100 | | 20 | 100 | 20 | | | |
| Trailing Detector (ft) | 0 | 0 | | | 0 | | 0 | 0 | 0 | | | |
| Detector 1 Position(ft) | 0 | 0 | | | 0 | | 0 | 0 | 0 | | | |
| Detector 1 Size(ft) | 20 | 6 | | | 6 | | 20 | 6 | 20 | | | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | |
| Turn Type | Prot | NA | | | NA | | Perm | NA | Perm | | | |
| Protected Phases | 5 15 | 5 6 15 | | | 6 16 | | | 7 8 | | | | |
| Permitted Phases | | | | | | | 7 8 | | 7 8 | | | |

Year 2020 No-Build
 17: US 59 NBFR & Northpark Dr.

AM Peak Hour

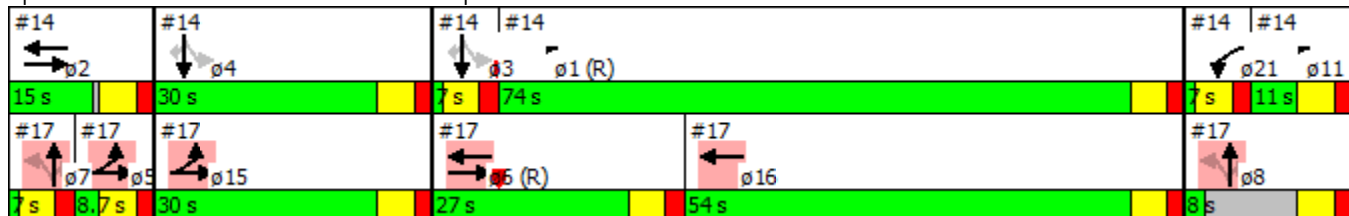


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|--------|-----|-----|------|-----|------|------|------|-----|-----|-----|
| Detector Phase | 5 15 | 5 6 15 | | | 6 16 | | 7 8 | 7 8 | 7 8 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | | | | | | | | | |
| Minimum Split (s) | | | | | | | | | | | | |
| Total Split (s) | | | | | | | | | | | | |
| Total Split (%) | | | | | | | | | | | | |
| Maximum Green (s) | | | | | | | | | | | | |
| Yellow Time (s) | | | | | | | | | | | | |
| All-Red Time (s) | | | | | | | | | | | | |
| Lost Time Adjust (s) | | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | | | | | | | | | |
| Recall Mode | | | | | | | | | | | | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 32.4 | 59.7 | | | 75.3 | | 19.0 | 19.0 | 19.0 | | | |
| Actuated g/C Ratio | 0.22 | 0.41 | | | 0.52 | | 0.13 | 0.13 | 0.13 | | | |
| v/c Ratio | 0.11 | 0.52 | | | 0.76 | | 0.40 | 0.33 | 0.64 | | | |
| Control Delay | 24.2 | 1.8 | | | 29.3 | | 60.5 | 59.3 | 8.3 | | | |
| Queue Delay | 0.0 | 1.3 | | | 0.2 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | 24.2 | 3.1 | | | 29.5 | | 60.5 | 59.3 | 8.3 | | | |
| LOS | C | A | | | C | | E | E | A | | | |
| Approach Delay | | 5.3 | | | 29.5 | | | 28.2 | | | | |
| Approach LOS | | A | | | C | | | C | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144.7 |
| Actuated Cycle Length: | 144.7 |
| Offset: | 110 (76%), Referenced to phase 1:WBTL and 6:, Start of Green |
| Natural Cycle: | 125 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.20 |
| Intersection Signal Delay: | 24.4 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 81.1% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 17: US 59 NBFR & Northpark Dr.



| Lane Group | ø1 | ø2 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 | | | | |
|-------------------------|-------|------|------|------|------|-------|------|------|------|------|------|------|-----|--|------|--|
| Detector Phase | | | | | | | | | | | | | | | | |
| Switch Phase | | | | | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 7.0 | 1.0 | 5.0 | 2.7 | 5.0 | 1.0 | 1.0 | 3.0 | 3.0 | 4.0 | 1.0 | | | | |
| Minimum Split (s) | 21.3 | 14.0 | 7.0 | 22.7 | 8.7 | 27.0 | 7.0 | 8.0 | 9.0 | 9.0 | 20.0 | 7.0 | | | | |
| Total Split (s) | 74.0 | 15.0 | 7.0 | 30.0 | 8.7 | 27.0 | 7.0 | 8.0 | 11.0 | 30.0 | 54.0 | 7.0 | | | | |
| Total Split (%) | 51% | 10% | 5% | 21% | 6% | 19% | 5% | 6% | 8% | 21% | 37% | 5% | | | | |
| Maximum Green (s) | 68.0 | 9.0 | 1.0 | 24.0 | 2.7 | 21.0 | 1.0 | 2.0 | 5.0 | 24.0 | 48.0 | 1.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | | |
| All-Red Time (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 | | | | |
| Lost Time Adjust (s) | | | | | | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | | | | | | |
| Lead/Lag | Lag | | Lead | | Lag | | Lead | | Lead | | Lag | | Lag | | Lead | |
| Lead-Lag Optimize? | Yes | | Yes | | Yes | | Yes | | Yes | | Yes | | Yes | | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | | |
| Recall Mode | C-Max | None | None | None | None | C-Max | None | None | None | None | None | None | | | | |
| Walk Time (s) | | | | | 5.0 | | | | | 5.0 | | | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | | | | | 16.0 | | | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | | | | 0 | | | | | | |
| Act Effect Green (s) | | | | | | | | | | | | | | | | |
| Actuated g/C Ratio | | | | | | | | | | | | | | | | |
| v/c Ratio | | | | | | | | | | | | | | | | |
| Control Delay | | | | | | | | | | | | | | | | |
| Queue Delay | | | | | | | | | | | | | | | | |
| Total Delay | | | | | | | | | | | | | | | | |
| LOS | | | | | | | | | | | | | | | | |
| Approach Delay | | | | | | | | | | | | | | | | |
| Approach LOS | | | | | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | | | | |

Year 2020 No-Build
19: US 59 NBFR & Hamblen

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | ↕ | | | | ↗ | | ↑↑ | ↗ | | | |
| Volume (vph) | 3 | 43 | 0 | 0 | 0 | 217 | 0 | 637 | 125 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | 0.997 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1857 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1857 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Link Speed (mph) | | 35 | | | 35 | | | 55 | | | | 55 |
| Link Distance (ft) | | 168 | | | 123 | | | 612 | | | | 7207 |
| Travel Time (s) | | 3.3 | | | 2.4 | | | 7.6 | | | | 89.3 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 4 | 53 | 0 | 0 | 0 | 267 | 0 | 782 | 154 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 57 | 0 | 0 | 0 | 267 | 0 | 782 | 154 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Free | | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
20: Loop 494 & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 40 | 862 | 108 | 191 | 1731 | 72 | 40 | 60 | 146 | 148 | 166 | 174 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 150 | | 0 | 150 | | 150 | 150 | | 150 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.983 | | | 0.994 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3479 | 0 | 1770 | 3518 | 0 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 3479 | 0 | 1770 | 3518 | 0 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | 5 | | | | 205 | | | 159 |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | | 30 |
| Link Distance (ft) | | 1797 | | | 1638 | | | 3315 | | | | 2861 |
| Travel Time (s) | | 27.2 | | | 24.8 | | | 75.3 | | | | 65.0 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 49 | 1059 | 133 | 235 | 2126 | 88 | 49 | 74 | 179 | 182 | 204 | 214 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 49 | 1192 | 0 | 235 | 2214 | 0 | 49 | 74 | 179 | 182 | 204 | 214 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 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 |

Year 2020 No-Build
20: Loop 494 & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|------|-------|-------|-------|-------|-------|
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.3 | 22.3 | 22.3 | 10.3 | 22.3 | 22.3 |
| Total Split (s) | 10.0 | 64.0 | | 33.0 | 87.0 | | 12.8 | 25.0 | 25.0 | 22.0 | 34.2 | 34.2 |
| Total Split (%) | 6.9% | 44.4% | | 22.9% | 60.4% | | 8.9% | 17.4% | 17.4% | 15.3% | 23.8% | 23.8% |
| Maximum Green (s) | 4.0 | 58.0 | | 27.0 | 81.0 | | 6.8 | 19.0 | 19.0 | 16.0 | 28.2 | 28.2 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | | None | C-Max | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 4.0 | 61.8 | | 23.2 | 81.0 | | 6.6 | 19.0 | 19.0 | 16.0 | 30.8 | 30.8 |
| Actuated g/C Ratio | 0.03 | 0.43 | | 0.16 | 0.56 | | 0.05 | 0.13 | 0.13 | 0.11 | 0.21 | 0.21 |
| v/c Ratio | 1.00 | 0.80 | | 0.83 | 1.12 | | 0.60 | 0.30 | 0.46 | 0.93 | 0.51 | 0.46 |
| Control Delay | 195.8 | 40.8 | | 81.8 | 82.1 | | 96.6 | 60.2 | 8.3 | 110.6 | 56.5 | 18.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 195.8 | 40.8 | | 81.8 | 82.1 | | 96.6 | 60.2 | 8.3 | 110.6 | 56.5 | 18.1 |
| LOS | F | D | | F | F | | F | E | A | F | E | B |
| Approach Delay | | 46.9 | | | 82.1 | | | 35.4 | | | 59.2 | |
| Approach LOS | | D | | | F | | | D | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 83 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 66.5
 Intersection LOS: E
 Intersection Capacity Utilization 93.2%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 20: Loop 494 & Northpark Dr.



Year 2020 No-Build
23: Brookdale & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 55 | 684 | 22 | 7 | 1255 | 27 | 28 | 16 | 14 | 34 | 42 | 177 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 150 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.995 | | | 0.997 | | | 0.964 | | | 0.895 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.977 | | | 0.993 | |
| Satd. Flow (prot) | 1770 | 3522 | 0 | 1770 | 3529 | 0 | 0 | 3333 | 0 | 0 | 3145 | 0 |
| Flt Permitted | 0.085 | | | 0.300 | | | | 0.727 | | | 0.897 | |
| Satd. Flow (perm) | 158 | 3522 | 0 | 559 | 3529 | 0 | 0 | 2480 | 0 | 0 | 2841 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 4 | | | 3 | | | 17 | | | 82 | |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 4882 | | | 2785 | | | 1365 | | | 843 | |
| Travel Time (s) | | 74.0 | | | 42.2 | | | 31.0 | | | 19.2 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 68 | 840 | 27 | 9 | 1541 | 33 | 34 | 20 | 17 | 42 | 52 | 217 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 68 | 867 | 0 | 9 | 1574 | 0 | 0 | 71 | 0 | 0 | 311 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |

Year 2020 No-Build
23: Brookdale & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.0 | |
| Total Split (s) | 12.0 | 99.0 | | 10.0 | 95.0 | | 10.0 | 29.0 | | 10.0 | 29.0 | |
| Total Split (%) | 8.1% | 66.9% | | 6.8% | 64.2% | | 6.8% | 19.6% | | 6.8% | 19.6% | |
| Maximum Green (s) | 6.0 | 93.0 | | 4.0 | 89.0 | | 4.0 | 23.0 | | 4.0 | 23.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | C-Max | | None | C-Max | | None | Max | | None | Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | 0 | |
| Act Effct Green (s) | 102.2 | 101.0 | | 96.6 | 93.4 | | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Actuated g/C Ratio | 0.69 | 0.68 | | 0.65 | 0.63 | | 0.22 | 0.22 | | 0.22 | 0.22 | |
| v/c Ratio | 0.39 | 0.36 | | 0.02 | 0.71 | | 0.13 | 0.13 | | 0.13 | 0.45 | |
| Control Delay | 13.7 | 10.7 | | 7.2 | 20.9 | | 35.5 | 35.5 | | 35.5 | 38.3 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 13.7 | 10.7 | | 7.2 | 20.9 | | 35.5 | 35.5 | | 35.5 | 38.3 | |
| LOS | B | B | | A | C | | D | D | | D | D | |
| Approach Delay | | 10.9 | | | 20.8 | | 35.5 | 35.5 | | | 38.3 | |
| Approach LOS | | B | | | C | | D | D | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 148
 Actuated Cycle Length: 148
 Offset: 41 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 19.9
 Intersection LOS: B
 Intersection Capacity Utilization 75.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 23: Brookdale & Northpark Dr.



Year 2020 No-Build
26: Northpark Dr. & Mills Branch

AM Peak Hour



| Lane Group | EBL | EBR | EBR2 | NWL2 | NWL | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 149 | 142 | 284 | 150 | 0 | 0 | 0 | 0 | 88 | 138 | 22 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 | | | 0 | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | 1 | | | 1 | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | | 25 | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.865 | | | | | | | | | | 0.976 |
| Flt Protected | | | | | 0.950 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1611 | 0 | 0 | 1770 | 0 | 0 | 0 | 0 | 1770 | 3454 | 0 |
| Flt Permitted | | | | | 0.950 | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1611 | 0 | 0 | 1770 | 0 | 0 | 0 | 0 | 1770 | 3454 | 0 |
| Link Speed (mph) | 30 | | | | 30 | | | 40 | | | 30 | |
| Link Distance (ft) | 674 | | | | 163 | | | 1792 | | | 311 | |
| Travel Time (s) | 15.3 | | | | 3.7 | | | 30.5 | | | 7.1 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.85 | 0.92 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.58 | 0.82 | 0.69 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 183 | 189 | 349 | 180 | 0 | 0 | 0 | 0 | 171 | 190 | 36 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 372 | 0 | 0 | 529 | 0 | 0 | 0 | 0 | 171 | 226 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | 0 | | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | 0 | | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | 9 | 9 | 15 | 15 | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | Stop | | | | Free | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| Lane Group | ø2 | ø15 |
|----------------------------|----|-----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |

Year 2020 No-Build
29: Northpark Dr. & Rock Springs

AM Peak Hour

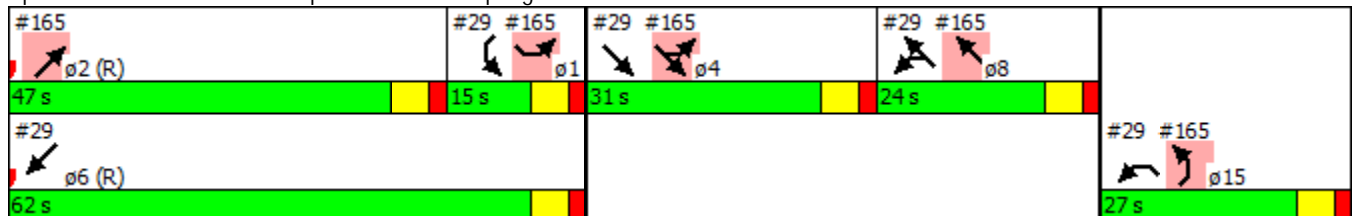


| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|-------------------------|-----|-------|-----|------|-------|-----|-----|-----|-----|-------|-------|-----|
| Detector Phase | | 4 | | 15 | 8 | | | | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 4.0 | |
| Minimum Split (s) | | 22.0 | | | 21.0 | | | | | 11.0 | 18.0 | |
| Total Split (s) | | 31.0 | | | 24.0 | | | | | 15.0 | 62.0 | |
| Total Split (%) | | 21.5% | | | 16.7% | | | | | 10.4% | 43.1% | |
| Maximum Green (s) | | 25.0 | | | 18.0 | | | | | 9.0 | 56.0 | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | | | 6.0 | 6.0 | |
| Lead/Lag | | Lead | | | Lag | | | | | Lag | | |
| Lead-Lag Optimize? | | Yes | | | Yes | | | | | Yes | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | |
| Recall Mode | | None | | | Max | | | | | Max | C-Max | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | 10.0 | | | | | | 7.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | | 0 | |
| Act Effect Green (s) | | 9.9 | | 60.1 | 33.1 | | | | | 9.0 | 56.0 | |
| Actuated g/C Ratio | | 0.07 | | 0.42 | 0.23 | | | | | 0.06 | 0.39 | |
| v/c Ratio | | 0.73 | | 0.11 | 0.16 | | | | | 0.06 | 0.52 | |
| Control Delay | | 25.2 | | 2.7 | 47.9 | | | | | 65.0 | 34.7 | |
| Queue Delay | | 0.0 | | 1.1 | 1.3 | | | | | 0.0 | 0.0 | |
| Total Delay | | 25.2 | | 3.8 | 49.2 | | | | | 65.0 | 34.7 | |
| LOS | | C | | A | D | | | | | E | C | |
| Approach Delay | | 25.2 | | | 32.4 | | | | | | 35.0 | |
| Approach LOS | | C | | | C | | | | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 114 (79%), Referenced to phase 2:NET and 6:, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 31.9
 Intersection LOS: C
 Intersection Capacity Utilization 47.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 29: Northpark Dr. & Rock Springs



| Lane Group | ø2 | ø15 |
|-------------------------|-------|------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 4.0 | 5.0 |
| Minimum Split (s) | 18.0 | 11.0 |
| Total Split (s) | 47.0 | 27.0 |
| Total Split (%) | 33% | 19% |
| Maximum Green (s) | 41.0 | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | C-Max | Max |
| Walk Time (s) | 5.0 | |
| Flash Dont Walk (s) | 7.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
32: Kingwood Dr. & Mills Branch

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | ↑↑ | | | | | | ↑↑ | |
| Volume (vph) | 0 | 32 | 323 | 5 | 220 | 0 | 0 | 0 | 0 | 0 | 41 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.869 | | | | | | | | | 0.939 | |
| Flt Protected | | | | | 0.998 | | | | | | | |
| Satd. Flow (prot) | 0 | 3076 | 0 | 0 | 3532 | 0 | 0 | 0 | 0 | 0 | 3323 | 0 |
| Flt Permitted | | | | | 0.998 | | | | | | | |
| Satd. Flow (perm) | 0 | 3076 | 0 | 0 | 3532 | 0 | 0 | 0 | 0 | 0 | 3323 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | 40 | |
| Link Distance (ft) | | 6684 | | | 199 | | | 1106 | | | 329 | |
| Travel Time (s) | | 151.9 | | | 4.5 | | | 18.9 | | | 5.6 | |
| Peak Hour Factor | 0.92 | 0.57 | 0.83 | 0.42 | 0.80 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.64 | 0.84 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 63 | 440 | 13 | 311 | 0 | 0 | 0 | 0 | 0 | 72 | 50 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 503 | 0 | 0 | 324 | 0 | 0 | 0 | 0 | 0 | 122 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 40 | | | 20 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 22.8% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
35: Russel Palmer & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↓ | | | | | | ↑ | ↗ | | ↖ | |
| Volume (vph) | 0 | 900 | 86 | 0 | 0 | 0 | 0 | 126 | 74 | 11 | 66 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 150 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.987 | | | | | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | 0.993 |
| Satd. Flow (prot) | 0 | 3493 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 0 | 1850 | 0 |
| Flt Permitted | | | | | | | | | | | | 0.939 |
| Satd. Flow (perm) | 0 | 3493 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 0 | 1749 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 13 | | | | | | | 91 | | | |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 117 | | | 2967 | | | 1145 | | | 106 | |
| Travel Time (s) | | 1.8 | | | 45.0 | | | 26.0 | | | 2.4 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 1105 | 106 | 0 | 0 | 0 | 0 | 155 | 91 | 14 | 81 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1211 | 0 | 0 | 0 | 0 | 0 | 155 | 91 | 0 | 95 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 2 | | | | | | 2 | 1 | 1 | 2 | |
| Detector Template | | Thru | | | | | | Thru | Right | Left | Thru | |
| Leading Detector (ft) | | 100 | | | | | | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | | 0 | | | | | | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | | 0 | | | | | | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | | 6 | | | | | | 6 | 20 | 20 | 6 | |
| Detector 1 Type | | Cl+Ex | | | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Turn Type | | NA | | | | | | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | | | | 8 | | | 4 | |
| Permitted Phases | | | | | | | | | 8 | 4 | | |

| Lane Group | ø1 | ø6 |
|----------------------------|----|----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |

Year 2020 No-Build
35: Russel Palmer & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------|-----|-------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-----|
| Detector Phase | | 2 | | | | | | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 15.0 | | | | | | 5.0 | 5.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | 21.3 | | | | | | 11.6 | 11.6 | 11.3 | 11.3 | |
| Total Split (s) | | 95.0 | | | | | | 28.0 | 28.0 | 28.0 | 28.0 | |
| Total Split (%) | | 66.0% | | | | | | 19.4% | 19.4% | 19.4% | 19.4% | |
| Maximum Green (s) | | 89.0 | | | | | | 22.0 | 22.0 | 22.0 | 22.0 | |
| Yellow Time (s) | | 4.0 | | | | | | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | | 2.0 | | | | | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | 6.0 | 6.0 | | 6.0 | |
| Lead/Lag | | Lag | | | | | | | | | | |
| Lead-Lag Optimize? | | Yes | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | | C-Max | | | | | | Max | Max | None | None | |
| Act Effect Green (s) | | 91.6 | | | | | | 22.0 | 22.0 | | 22.0 | |
| Actuated g/C Ratio | | 0.64 | | | | | | 0.15 | 0.15 | | 0.15 | |
| v/c Ratio | | 0.54 | | | | | | 0.55 | 0.29 | | 0.36 | |
| Control Delay | | 15.8 | | | | | | 64.4 | 12.4 | | 117.3 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | 0.0 | | 125.3 | |
| Total Delay | | 15.8 | | | | | | 64.4 | 12.4 | | 242.6 | |
| LOS | | B | | | | | | E | B | | F | |
| Approach Delay | | 15.8 | | | | | | 45.2 | | | 242.6 | |
| Approach LOS | | B | | | | | | D | | | F | |

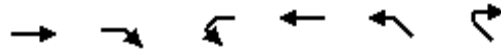
Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.85 |
| Intersection Signal Delay: | 34.4 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 56.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 35: Russel Palmer & Northpark Dr.



| Lane Group | ø1 | ø6 |
|-----------------------------|------|-------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 5.0 | 15.0 |
| Minimum Split (s) | 11.3 | 21.3 |
| Total Split (s) | 21.0 | 116.0 |
| Total Split (%) | 15% | 81% |
| Maximum Green (s) | 15.0 | 110.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | None | C-Max |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | ↑↑ | | |
| Volume (vph) | 1156 | 0 | 0 | 1994 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3539 | 0 | 0 | 3539 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3539 | 0 | 0 | 3539 | 0 | 0 |
| Link Speed (mph) | 45 | | | 40 | 45 | |
| Link Distance (ft) | 1638 | | | 2834 | 2834 | |
| Travel Time (s) | 24.8 | | | 48.3 | 42.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 1420 | 0 | 0 | 2449 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1420 | 0 | 0 | 2449 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | 12 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 69.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |

Year 2020 No-Build
43: Sorters Rd & US 59 SBFR

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | ↖ | ↑↑ | | | | | | ↙↑ | ↗ |
| Volume (vph) | 0 | 21 | 183 | 221 | 182 | 0 | 0 | 0 | 0 | 77 | 2 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 150 | 200 | | 0 | 0 | | 0 | 0 | | 150 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.866 | | | | | | | | | | 0.850 |
| Flt Protected | | | | 0.950 | | | | | | | 0.953 | |
| Satd. Flow (prot) | 0 | 4404 | 0 | 1770 | 3539 | 0 | 0 | 0 | 0 | 0 | 3373 | 1583 |
| Flt Permitted | | | | 0.590 | | | | | | | 0.953 | |
| Satd. Flow (perm) | 0 | 4404 | 0 | 1099 | 3539 | 0 | 0 | 0 | 0 | 0 | 3373 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 225 | | | | | | | | | | 74 |
| Link Speed (mph) | | 35 | | | 35 | | | 55 | | | | 55 |
| Link Distance (ft) | | 893 | | | 863 | | | 983 | | | | 6715 |
| Travel Time (s) | | 17.4 | | | 16.8 | | | 12.2 | | | | 83.2 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 26 | 225 | 271 | 224 | 0 | 0 | 0 | 0 | 95 | 2 | 25 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 251 | 0 | 271 | 224 | 0 | 0 | 0 | 0 | 0 | 97 | 25 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | | NA | | Perm | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 6 | |
| Permitted Phases | | | | 8 | | | | | | 6 | | 6 |
| Minimum Split (s) | | 22.0 | | 22.0 | 22.0 | | | | | 22.0 | 22.0 | 22.0 |
| Total Split (s) | | 22.0 | | 22.0 | 22.0 | | | | | 22.0 | 22.0 | 22.0 |
| Total Split (%) | | 50.0% | | 50.0% | 50.0% | | | | | 50.0% | 50.0% | 50.0% |
| Maximum Green (s) | | 16.0 | | 16.0 | 16.0 | | | | | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | | 4.0 | | 4.0 | 4.0 | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | | | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | | | | | 6.0 | 6.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | 5.0 | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 | 0 | | | | | 0 | 0 | 0 |
| Act Effect Green (s) | | 16.0 | | 16.0 | 16.0 | | | | | | 16.0 | 16.0 |
| Actuated g/C Ratio | | 0.36 | | 0.36 | 0.36 | | | | | | 0.36 | 0.36 |
| v/c Ratio | | 0.14 | | 0.68 | 0.17 | | | | | | 0.08 | 0.04 |

Year 2020 No-Build
 43: Sorters Rd & US 59 SBFR

AM Peak Hour

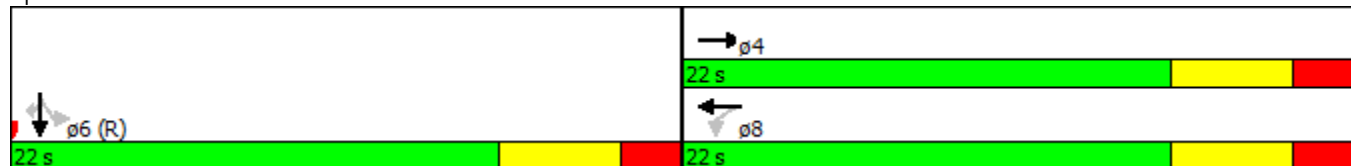


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|
| Control Delay | | 2.7 | | 18.7 | 4.2 | | | | | | 3.7 | 0.3 |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | | | | | 0.0 | 0.0 |
| Total Delay | | 2.7 | | 18.7 | 4.2 | | | | | | 3.7 | 0.3 |
| LOS | | A | | B | A | | | | | | A | A |
| Approach Delay | | 2.7 | | | 12.2 | | | | | | 3.0 | |
| Approach LOS | | A | | | B | | | | | | A | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 44 |
| Actuated Cycle Length: | 44 |
| Offset: | 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.68 |
| Intersection Signal Delay: | 8.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 38.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Sorters Rd & US 59 SBFR



Year 2020 No-Build
45: Loop 494 & Sorters Rd

AM Peak Hour



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 61 | 42 | 317 | 492 | 22 | 86 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 150 | 180 | | | 225 |
| Storage Lanes | 2 | 1 | 1 | | | 1 |
| Taper Length (ft) | 25 | | 25 | | | |
| Lane Util. Factor | 0.97 | 0.88 | 0.97 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 3433 | 2787 | 3433 | 3539 | 3539 | 1583 |
| Flt Permitted | 0.950 | | 0.739 | | | |
| Satd. Flow (perm) | 3433 | 2787 | 2671 | 3539 | 3539 | 1583 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 52 | | | | 106 |
| Link Speed (mph) | 35 | | | 45 | 45 | |
| Link Distance (ft) | 863 | | | 804 | 572 | |
| Travel Time (s) | 16.8 | | | 12.2 | 8.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 75 | 52 | 389 | 604 | 27 | 106 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 75 | 52 | 389 | 604 | 27 | 106 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 36 | | | 24 | 24 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Turn Type | NA | Perm | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Minimum Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 |
| Total Split (s) | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 |
| Total Split (%) | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| Maximum Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Actuated g/C Ratio | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 |
| v/c Ratio | 0.06 | 0.05 | 0.40 | 0.47 | 0.02 | 0.16 |

Year 2020 No-Build
45: Loop 494 & Sorters Rd

AM Peak Hour

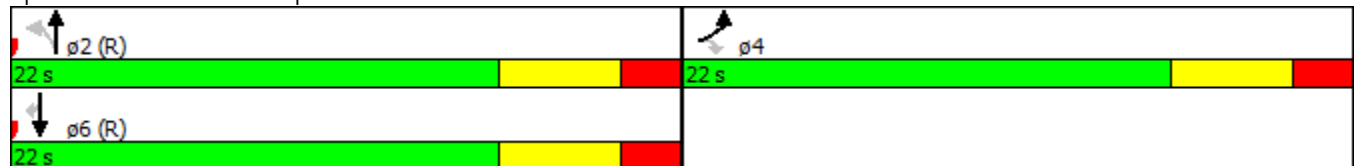


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------|-----|-----|------|------|-----|-----|
| Control Delay | 5.6 | 2.3 | 12.0 | 12.2 | 9.1 | 3.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.6 | 2.3 | 12.0 | 12.2 | 9.1 | 3.5 |
| LOS | A | A | B | B | A | A |
| Approach Delay | 4.3 | | | 12.1 | 4.6 | |
| Approach LOS | A | | | B | A | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 44 |
| Actuated Cycle Length: | 44 |
| Offset: | 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.47 |
| Intersection Signal Delay: | 10.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 30.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Loop 494 & Sorters Rd



Year 2020 No-Build
49: Hamblen & Laurel Springs

AM Peak Hour



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 36 | 136 | 422 | 18 | 17 | 124 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.994 | | 0.881 | |
| Flt Protected | | 0.990 | | | 0.994 | |
| Satd. Flow (prot) | 0 | 1844 | 1852 | 0 | 1631 | 0 |
| Flt Permitted | | 0.990 | | | 0.994 | |
| Satd. Flow (perm) | 0 | 1844 | 1852 | 0 | 1631 | 0 |
| Link Speed (mph) | | 35 | 35 | | 30 | |
| Link Distance (ft) | | 1799 | 1596 | | 734 | |
| Travel Time (s) | | 35.0 | 31.1 | | 16.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 44 | 167 | 518 | 22 | 21 | 152 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 211 | 540 | 0 | 173 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 0 | 0 | | 12 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 56.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

53: Kingwood Dr. & Woodland Grove Dr.



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | ø1 | ø3 | ø4 | ø6 | ø7 | ø8 |
|----------------------------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|
| Lane Configurations | ↖ | ↗↗ | ↖↖ | | ↘↘ | | | | | | | |
| Volume (vph) | 33 | 691 | 1976 | 9 | 20 | 239 | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 0.95 | 0.97 | 0.95 | | | | | | |
| Frt | | | 0.999 | | 0.861 | | | | | | | |
| Flt Protected | 0.950 | | | | 0.996 | | | | | | | |
| Satd. Flow (prot) | 1770 | 3539 | 3536 | 0 | 3099 | 0 | | | | | | |
| Flt Permitted | 0.950 | | | | 0.996 | | | | | | | |
| Satd. Flow (perm) | 1770 | 3539 | 3536 | 0 | 3099 | 0 | | | | | | |
| Right Turn on Red | | | | Yes | | Yes | | | | | | |
| Satd. Flow (RTOR) | | | | | 271 | | | | | | | |
| Link Speed (mph) | | 40 | 40 | | 30 | | | | | | | |
| Link Distance (ft) | | 315 | 225 | | 626 | | | | | | | |
| Travel Time (s) | | 5.4 | 3.8 | | 14.2 | | | | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | | | |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | | | | | | |
| Adj. Flow (vph) | 42 | 879 | 2513 | 11 | 25 | 304 | | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 42 | 879 | 2524 | 0 | 329 | 0 | | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | | |
| Median Width(ft) | | 40 | 40 | | 24 | | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | | |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | | | | | | | |
| Detector 1 Size(ft) | 20 | 6 | 6 | | 20 | | | | | | | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | | | | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | | | | | | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | | | | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | | | | | | | |
| Detector 2 Position(ft) | | 94 | 94 | | | | | | | | | |
| Detector 2 Size(ft) | | 6 | 6 | | | | | | | | | |
| Detector 2 Type | | Cl+Ex | Cl+Ex | | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | 0.0 | | | | | | | | | |
| Turn Type | Prot | NA | NA | | NA | | | | | | | |
| Protected Phases | 5 | 2 | 3 6 | | 4 7 | | 1 | 3 | 4 | 6 | 7 | 8 |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | 5 | 2 | 3 6 | | 4 7 | | | | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | | | | 3.0 | 1.0 | 5.0 | 2.0 | 1.0 | 5.0 |

53: Kingwood Dr. & Woodland Grove Dr.



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | ø1 | ø3 | ø4 | ø6 | ø7 | ø8 |
|-------------------------|-------|-------|------|-----|------|-----|------|------|------|-------|------|------|
| Minimum Split (s) | 9.0 | 29.0 | | | | | 10.0 | 14.5 | 11.0 | 22.0 | 7.0 | 11.0 |
| Total Split (s) | 30.0 | 60.0 | | | | | 30.0 | 25.0 | 29.0 | 60.0 | 29.0 | 25.0 |
| Total Split (%) | 20.8% | 41.7% | | | | | 21% | 17% | 20% | 42% | 20% | 17% |
| Maximum Green (s) | 24.0 | 54.0 | | | | | 24.0 | 19.0 | 23.0 | 54.0 | 23.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 | | | | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | | | | | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | | | | | |
| Lead/Lag | Lead | Lag | | | | | Lead | | | Lag | | |
| Lead-Lag Optimize? | Yes | Yes | | | | | Yes | | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | | | | | None | None | None | C-Max | None | None |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | | |
| Act Effect Green (s) | 8.8 | 77.8 | 99.0 | | 20.5 | | | | | | | |
| Actuated g/C Ratio | 0.06 | 0.54 | 0.69 | | 0.14 | | | | | | | |
| v/c Ratio | 0.39 | 0.46 | 1.04 | | 0.49 | | | | | | | |
| Control Delay | 74.5 | 22.7 | 32.0 | | 13.9 | | | | | | | |
| Queue Delay | 0.0 | 0.0 | 25.4 | | 0.0 | | | | | | | |
| Total Delay | 74.5 | 22.7 | 57.4 | | 13.9 | | | | | | | |
| LOS | E | C | E | | B | | | | | | | |
| Approach Delay | | 25.1 | 57.4 | | 13.9 | | | | | | | |
| Approach LOS | | C | E | | B | | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 45.7
 Intersection LOS: D
 Intersection Capacity Utilization 83.8%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 53: Kingwood Dr. & Woodland Grove Dr.



Year 2020 No-Build
54: Woodland Hills & Hamblen

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. 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 |
| Frt | | | | | 0.865 | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.950 | |
| Satd. Flow (prot) | 1863 | 0 | 0 | 0 | 1611 | 0 | 0 | 1863 | 0 | 0 | 1770 | 0 |
| Flt Permitted | | | | | | | | | | | 0.950 | |
| Satd. Flow (perm) | 1863 | 0 | 0 | 0 | 1611 | 0 | 0 | 1863 | 0 | 0 | 1770 | 0 |
| Link Speed (mph) | | 35 | | | 35 | | | 35 | | | 35 | |
| Link Distance (ft) | | 6657 | | | 997 | | | 912 | | | 3265 | |
| Travel Time (s) | | 129.7 | | | 19.4 | | | 17.8 | | | 63.6 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 7 | 0 | 0 |
| Shared Lane Traffic (%) | 0% | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 13.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
57: Redbud & Hamblen

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 38 | 5 | 28 | 2 | 6 | 2 | 14 | 77 | 1 | 0 | 89 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. 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 |
| Frt | | 0.947 | | | 0.975 | | | 0.999 | | | 0.998 | |
| Flt Protected | | 0.974 | | | 0.991 | | | 0.993 | | | | |
| Satd. Flow (prot) | 0 | 1718 | 0 | 0 | 1800 | 0 | 0 | 1848 | 0 | 0 | 1859 | 0 |
| Flt Permitted | | 0.974 | | | 0.991 | | | 0.993 | | | | |
| Satd. Flow (perm) | 0 | 1718 | 0 | 0 | 1800 | 0 | 0 | 1848 | 0 | 0 | 1859 | 0 |
| Link Speed (mph) | | 35 | | | 35 | | | 30 | | | 30 | |
| Link Distance (ft) | | 753 | | | 6657 | | | 361 | | | 271 | |
| Travel Time (s) | | 14.7 | | | 129.7 | | | 8.2 | | | 6.2 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 47 | 6 | 34 | 2 | 7 | 2 | 17 | 95 | 1 | 0 | 109 | 2 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 87 | 0 | 0 | 11 | 0 | 0 | 113 | 0 | 0 | 111 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
60: Forest Cove & Hamblen

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 62 | 62 | 5 | 1 | 96 | 3 | 12 | 7 | 2 | 3 | 19 | 242 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. 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 |
| Frt | | 0.995 | | | 0.996 | | | 0.990 | | | 0.876 | |
| Flt Protected | | 0.977 | | | | | | 0.972 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1811 | 0 | 0 | 1855 | 0 | 0 | 1792 | 0 | 0 | 1630 | 0 |
| Flt Permitted | | 0.977 | | | | | | 0.972 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1811 | 0 | 0 | 1855 | 0 | 0 | 1792 | 0 | 0 | 1630 | 0 |
| Link Speed (mph) | | 35 | | | 35 | | | 30 | | | 30 | |
| Link Distance (ft) | | 1966 | | | 1019 | | | 472 | | | 603 | |
| Travel Time (s) | | 38.3 | | | 19.9 | | | 10.7 | | | 13.7 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 76 | 76 | 6 | 1 | 118 | 4 | 15 | 9 | 2 | 4 | 23 | 297 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 158 | 0 | 0 | 123 | 0 | 0 | 26 | 0 | 0 | 324 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
64: Woodland Hills & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 137 | 482 | 36 | 143 | 1353 | 68 | 43 | 103 | 112 | 84 | 126 | 416 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 150 | | 0 | 150 | | 0 | 150 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.990 | | | 0.993 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3504 | 0 | 1770 | 3514 | 0 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.070 | | | 0.382 | | | 0.560 | | | 0.618 | | |
| Satd. Flow (perm) | 130 | 3504 | 0 | 712 | 3514 | 0 | 1043 | 1863 | 1583 | 1151 | 1863 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 8 | | | | 142 | | | 37 |
| Link Speed (mph) | | 40 | | | 40 | | | 35 | | | | 35 |
| Link Distance (ft) | | 266 | | | 1473 | | | 2549 | | | | 2207 |
| Travel Time (s) | | 4.5 | | | 25.1 | | | 49.7 | | | | 43.0 |
| 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 |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% |
| Adj. Flow (vph) | 174 | 613 | 46 | 182 | 1721 | 86 | 55 | 131 | 142 | 107 | 160 | 529 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 174 | 659 | 0 | 182 | 1807 | 0 | 55 | 131 | 142 | 107 | 160 | 529 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 70 | | | 75 | | | 20 | | | | 30 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 2 | | | 6 | | | 8 | | | | 4 |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | 4 |
| Minimum Split (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 |
| Total Split (s) | 105.0 | 105.0 | | 105.0 | 105.0 | | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 |
| Total Split (%) | 72.9% | 72.9% | | 72.9% | 72.9% | | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% |
| Maximum Green (s) | 99.0 | 99.0 | | 99.0 | 99.0 | | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effect Green (s) | 99.0 | 99.0 | | 99.0 | 99.0 | | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 |
| Actuated g/C Ratio | 0.69 | 0.69 | | 0.69 | 0.69 | | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| v/c Ratio | 1.96 | 0.27 | | 0.37 | 0.75 | | 0.23 | 0.31 | 0.30 | 0.41 | 0.38 | 1.35 |

Year 2020 No-Build
64: Woodland Hills & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-------|-------|-----|------|------|-----|------|------|-----|------|-------|-------|
| Control Delay | 488.6 | 8.8 | | 12.1 | 16.9 | | 48.3 | 48.4 | 8.4 | 52.7 | 49.9 | 213.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 488.6 | 8.8 | | 12.1 | 16.9 | | 48.3 | 48.4 | 8.4 | 52.7 | 49.9 | 213.8 |
| LOS | F | A | | B | B | | D | D | A | D | D | F |
| Approach Delay | | 109.0 | | | 16.4 | | | 31.1 | | | 159.2 | |
| Approach LOS | | F | | | B | | | C | | | F | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 39 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.96 |
| Intersection Signal Delay: | 66.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 94.8% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Splits and Phases: 64: Woodland Hills & Kingwood Dr.



Year 2020 No-Build
69: Kingwood Dr. & High Valley

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | NBR2 | SWL | SWR | ø1 |
|----------------------------|-------|-------|-------|------|-------|-------|--------|--------|-------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 56 | 43 | 0 | 0 | 163 | 68 | 7 | 290 | 43 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | |
| Frt | | | | | 0.956 | | | 0.850 | | | | |
| Flt Protected | 0.950 | 0.993 | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 1681 | 1757 | 0 | 0 | 3383 | 0 | 0 | 2787 | 0 | 0 | 0 | |
| Flt Permitted | 0.950 | 0.993 | | | | | 0.950 | | | | | |
| Satd. Flow (perm) | 1681 | 1757 | 0 | 0 | 3383 | 0 | 0 | 2787 | 0 | 0 | 0 | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | Yes | |
| Satd. Flow (RTOR) | | | | | 38 | | | 159 | | | | |
| Link Speed (mph) | | 30 | | | 30 | | 40 | | | 40 | | |
| Link Distance (ft) | | 93 | | | 765 | | 1292 | | | 1077 | | |
| Travel Time (s) | | 2.1 | | | 17.4 | | 22.0 | | | 18.4 | | |
| 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 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | |
| Adj. Flow (vph) | 69 | 53 | 0 | 0 | 200 | 84 | 9 | 356 | 53 | 0 | 0 | |
| Shared Lane Traffic (%) | 13% | | | | | | | | | | | |
| Lane Group Flow (vph) | 60 | 62 | 0 | 0 | 284 | 0 | 9 | 409 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Right | Left | Right | |
| Median Width(ft) | | 12 | | | 12 | | 0 | | | 0 | | |
| Link Offset(ft) | | 0 | | | 0 | | 0 | | | 0 | | |
| Crosswalk Width(ft) | | 16 | | | 16 | | 16 | | | 16 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | 9 | 9 | 15 | 9 | |
| Turn Type | Prot | NA | | | NA | | NA | custom | | | | |
| Protected Phases | 1 4 | 4 | | | 8 | | 15 | 2 | | | | 1 |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 11.0 | | | 19.0 | | 11.0 | 20.0 | | | | 11.0 |
| Total Split (s) | | 17.0 | | | 28.0 | | 16.0 | 67.0 | | | | 16.0 |
| Total Split (%) | | 11.8% | | | 19.4% | | 11.1% | 46.5% | | | | 11% |
| Maximum Green (s) | | 11.0 | | | 22.0 | | 10.0 | 61.0 | | | | 10.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | | 4.0 |
| All-Red Time (s) | | 2.0 | | | 2.0 | | 2.0 | 2.0 | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | | |
| Lead/Lag | | Lead | | | Lag | | | Lead | | | | Lag |
| Lead-Lag Optimize? | | Yes | | | Yes | | | Yes | | | | Yes |
| Walk Time (s) | | | | | 6.0 | | | 4.0 | | | | |
| Flash Dont Walk (s) | | | | | 7.0 | | | 10.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 27.0 | 27.0 | | | 22.0 | | 0.0 | 61.0 | | | | |
| Actuated g/C Ratio | 0.19 | 0.19 | | | 0.15 | | 0.00 | 0.42 | | | | |
| v/c Ratio | 0.19 | 0.19 | | | 0.52 | | no cap | 0.32 | | | | |
| Control Delay | 24.8 | 24.7 | | | 52.1 | | | 29.6 | | | | |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | | 0.0 | | | | |
| Total Delay | 24.8 | 24.7 | | | 52.1 | | Error | 29.6 | | | | |

| Lane Group | ø6 |
|----------------------------|------|
| Lane Configurations | |
| Volume (vph) | |
| Ideal Flow (vphp) | |
| Lane Util. Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Growth Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Turn Type | |
| Protected Phases | 6 |
| Permitted Phases | |
| Minimum Split (s) | 10.0 |
| Total Split (s) | 83.0 |
| Total Split (%) | 58% |
| Maximum Green (s) | 77.0 |
| Yellow Time (s) | 4.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Walk Time (s) | |
| Flash Dont Walk (s) | |
| Pedestrian Calls (#/hr) | |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |

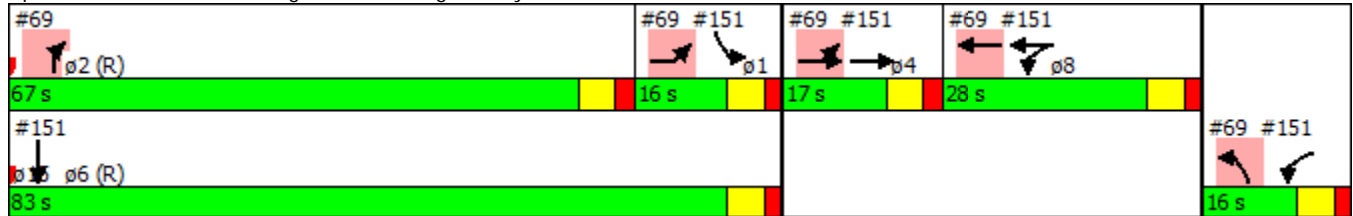


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | NBR2 | SWL | SWR | ø1 |
|----------------|-----|------|-----|-----|------|-----|-----|-----|------|-----|-----|----|
| LOS | C | C | | | D | | F | C | | | | |
| Approach Delay | | 24.7 | | | 52.1 | | Err | | | | | |
| Approach LOS | | C | | | D | | F | | | | | |

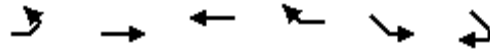
Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 90 (63%), Referenced to phase 2:NBR and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | Err |
| Intersection Signal Delay: | Err |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | Err% |
| ICU Level of Service: | H |
| Analysis Period (min): | 15 |

Splits and Phases: 69: Kingwood Dr. & High Valley



| | |
|----------------------|----|
| Lane Group | ø6 |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Intersection Summary | |



















| Lane Group | EBL | EBT | WBT | WBR | SEL | SER |
|----------------------------|------|------|------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Link Speed (mph) | | 40 | 40 | | 40 | |
| Link Distance (ft) | | 291 | 315 | | 343 | |
| Travel Time (s) | | 5.0 | 5.4 | | 5.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 40 | 40 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
74: Kingwood Dr. & Willow Terrace

AM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SET | SER | NWL | NWT | NWR |
| Lane Configurations |  |  | | | | | |  | | |  | |
| Volume (vph) | 24 | 297 | 185 | 0 | 0 | 0 | 16 | 39 | 0 | 0 | 446 | 34 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.942 | | | | | | | | | 0.989 | |
| Flt Protected | 0.950 | | | | | | | 0.986 | | | | |
| Satd. Flow (prot) | 1770 | 3334 | 0 | 0 | 0 | 0 | 0 | 3490 | 0 | 0 | 3500 | 0 |
| Flt Permitted | 0.950 | | | | | | | 0.986 | | | | |
| Satd. Flow (perm) | 1770 | 3334 | 0 | 0 | 0 | 0 | 0 | 3490 | 0 | 0 | 3500 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 94 | | | | | | | | | | 5 |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | | 30 |
| Link Distance (ft) | | 1403 | | | 525 | | | 105 | | | | 533 |
| Travel Time (s) | | 23.9 | | | 8.9 | | | 2.4 | | | | 12.1 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 29 | 365 | 227 | 0 | 0 | 0 | 20 | 48 | 0 | 0 | 548 | 42 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 29 | 592 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 0 | 590 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | | 0 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Prot | NA | | | | | Prot | NA | | | NA | |
| Protected Phases | 15 | 2 | | | | | 14 | 4 | | | 8 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | 11.0 | 20.0 | | | | | | 11.0 | | | 19.0 | |
| Total Split (s) | 25.0 | 48.0 | | | | | | 14.0 | | | 42.0 | |
| Total Split (%) | 17.4% | 33.3% | | | | | | 9.7% | | | 29.2% | |
| Maximum Green (s) | 19.0 | 42.0 | | | | | | 8.0 | | | 36.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | 6.0 | | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lead | | | Lag | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | | | Yes | |
| Walk Time (s) | | 4.0 | | | | | | | | | 6.0 | |
| Flash Dont Walk (s) | | 10.0 | | | | | | | | | 7.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | 19.0 | 42.0 | | | | | | 23.0 | | | 36.0 | |
| Actuated g/C Ratio | 0.13 | 0.29 | | | | | | 0.16 | | | 0.25 | |
| v/c Ratio | 0.12 | 0.57 | | | | | | 0.12 | | | 0.67 | |

| Lane Group | ø1 | ø6 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 15.0 | 63.0 |
| Total Split (%) | 10% | 44% |
| Maximum Green (s) | 9.0 | 57.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
74: Kingwood Dr. & Willow Terrace

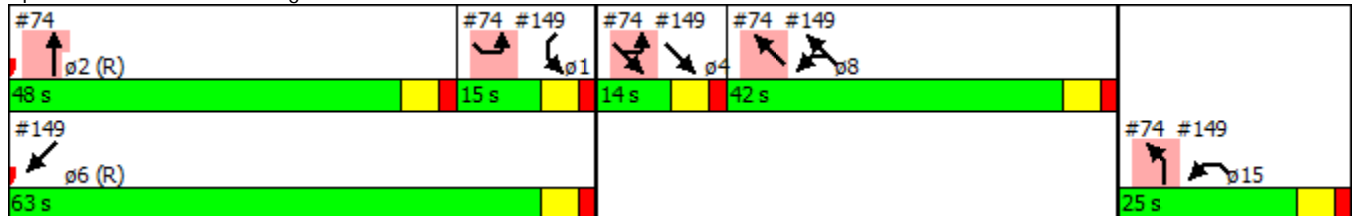
AM Peak Hour

| Lane Group | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Control Delay | 48.0 | 74.9 | | | | | | 15.7 | | | 52.7 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 2.4 | | | 0.0 | |
| Total Delay | 48.0 | 74.9 | | | | | | 18.2 | | | 52.7 | |
| LOS | D | E | | | | | | B | | | D | |
| Approach Delay | | 73.7 | | | | | | 18.2 | | | 52.7 | |
| Approach LOS | | E | | | | | | B | | | D | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 12 (8%), Referenced to phase 2:NBT and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 61.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 41.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 74: Kingwood Dr. & Willow Terrace



| Lane Group | ø1 | ø6 |
|----------------------|----|----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
77: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 31 | 476 | 23 | 0 | 0 | 0 | 0 | 44 | 3 | 12 | 13 | 0 |
| Ideal Flow (vphp) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.993 | | | | | | 0.990 | | | | |
| Flt Protected | 0.950 | | | | | | | | | | 0.976 | |
| Satd. Flow (prot) | 1770 | 3514 | 0 | 0 | 0 | 0 | 0 | 3504 | 0 | 0 | 3454 | 0 |
| Flt Permitted | 0.950 | | | | | | | | | | 0.976 | |
| Satd. Flow (perm) | 1770 | 3514 | 0 | 0 | 0 | 0 | 0 | 3504 | 0 | 0 | 3454 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 5 | | | | | | 4 | | | | |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | 30 | |
| Link Distance (ft) | | 814 | | | 1647 | | | 741 | | | 83 | |
| Travel Time (s) | | 13.9 | | | 28.1 | | | 16.8 | | | 1.9 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 38 | 585 | 28 | 0 | 0 | 0 | 0 | 54 | 4 | 15 | 16 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 38 | 613 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 31 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Prot | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 15 | 2 | | | | | | 8 | | 14 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | 11.0 | 20.0 | | | | | | 19.0 | | | 11.0 | |
| Total Split (s) | 17.0 | 78.0 | | | | | | 20.0 | | | 16.0 | |
| Total Split (%) | 11.8% | 54.2% | | | | | | 13.9% | | | 11.1% | |
| Maximum Green (s) | 11.0 | 72.0 | | | | | | 14.0 | | | 10.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | 6.0 | | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lag | | | Lead | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | | | Yes | |
| Walk Time (s) | | 4.0 | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | 10.0 | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | 11.0 | 72.0 | | | | | | 14.0 | | | 23.0 | |
| Actuated g/C Ratio | 0.08 | 0.50 | | | | | | 0.10 | | | 0.16 | |
| v/c Ratio | 0.28 | 0.35 | | | | | | 0.17 | | | 0.06 | |

| Lane Group | ø1 | ø6 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 13.0 | 91.0 |
| Total Split (%) | 9% | 63% |
| Maximum Green (s) | 7.0 | 85.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
77: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

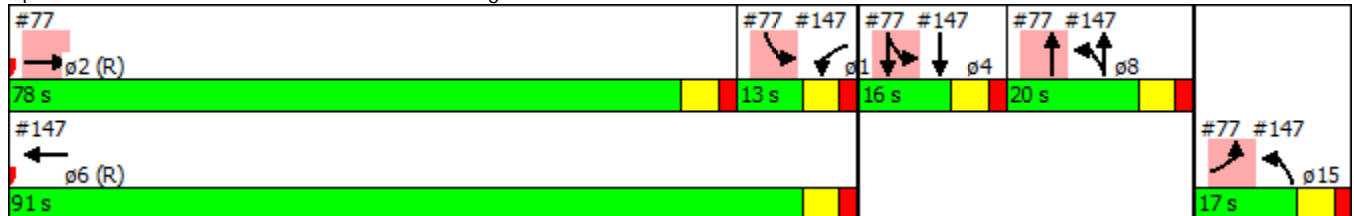


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Control Delay | 68.6 | 22.3 | | | | | | 56.9 | | | 20.7 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | 68.6 | 22.3 | | | | | | 56.9 | | | 20.7 | |
| LOS | E | C | | | | | | E | | | C | |
| Approach Delay | | 25.0 | | | | | | 56.9 | | | 20.7 | |
| Approach LOS | | C | | | | | | E | | | C | |

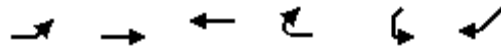
Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 12 (8%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.59 |
| Intersection Signal Delay: | 27.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 33.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 77: Timber Shade Dr. & Kingwood Dr.



| Lane Group | ø1 | ø6 |
|----------------------|----|----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3614 | 0 | 0 | 0 | 0 | 3278 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3614 | 0 | 0 | 0 | 0 | 3278 |
| Link Speed (mph) | | 40 | 40 | | 40 | |
| Link Distance (ft) | | 583 | 814 | | 839 | |
| Travel Time (s) | | 9.9 | 13.9 | | 14.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 24 | 24 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | NBT | NBR | SBU | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|-------|------|------|------|-------|
| Lane Configurations | | | ⬇ | | ⬆⬆⬆⬆ | | |
| Volume (vph) | 0 | 0 | 131 | 0 | 887 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.81 | 1.00 | 1.00 |
| Frt | | | | | | | |
| Flt Protected | | | 0.950 | | | | |
| Satd. Flow (prot) | 0 | 0 | 1770 | 0 | 7544 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | | |
| Satd. Flow (perm) | 0 | 0 | 1770 | 0 | 7544 | 0 | 0 |
| Link Speed (mph) | 55 | | | | 55 | 30 | |
| Link Distance (ft) | 255 | | | | 1812 | 318 | |
| Travel Time (s) | 3.2 | | | | 22.5 | 7.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 161 | 0 | 1089 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 161 | 0 | 1089 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | R NA | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | | 12 | 0 | |
| Link Offset(ft) | 0 | | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 9 | 15 | | 15 | 9 |
| Sign Control | Stop | | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 131 | 0 | 0 | 423 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 5085 | 0 | 0 |
| Link Speed (mph) | 30 | | | 55 | 55 | |
| Link Distance (ft) | 318 | | | 309 | 1638 | |
| Travel Time (s) | 7.2 | | | 3.8 | 20.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 161 | 0 | 0 | 520 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 161 | 0 | 0 | 520 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | 0 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Sign Control | Yield | | | Free | Stop | |

Intersection Summary

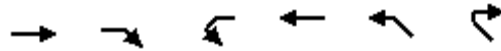
| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | EBL | EBR | NBL | NBT | NBR | SBL | SBT | SBR | SWL | SWR |
|----------------------------|------|-------|------|------|-------|------|------|-------|-------|-------|
| Lane Configurations | | | | | | | 6 | | 7 | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 2267 | 0 | 233 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | | | | | |
| Flt Protected | | | | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 0 | 0 | 8494 | 0 | 1770 | 0 |
| Flt Permitted | | | | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 0 | 0 | 8494 | 0 | 1770 | 0 |
| Link Speed (mph) | 30 | | | 55 | | | 55 | | 30 | |
| Link Distance (ft) | 48 | | | 6181 | | | 398 | | 362 | |
| Travel Time (s) | 1.1 | | | 76.6 | | | 4.9 | | 8.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 2784 | 0 | 286 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 2784 | 0 | 286 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(ft) | 0 | | | 0 | | | 0 | | 12 | |
| Link Offset(ft) | 0 | | | 0 | | | 0 | | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | | | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | 9 | 15 | | 9 | 15 | 9 |
| Sign Control | Stop | | | Stop | | | Free | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 46.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑↑ | | ↑↑ | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3278 | 0 | 3539 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3278 | 0 | 3539 | 0 | 0 |
| Link Speed (mph) | 40 | | | 40 | 30 | |
| Link Distance (ft) | 1473 | | | 523 | 4245 | |
| Travel Time (s) | 25.1 | | | 8.9 | 96.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 75 | | | 70 | 70 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 15 | 15 | | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|-----------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% ICU Level of Service A |
| Analysis Period (min) | 15 |

Year 2020 No-Build
88: Kingwood Dr. & Kingwood High School

AM Peak Hour



| Lane Group | SEL | SER | NEL | NET | SWT | SWR | ø6 | ø8 |
|----------------------------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↙↘ | | ↙ | ↑↑ | | | | |
| Volume (vph) | 94 | 0 | 72 | 821 | 0 | 0 | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | | |
| Frt | | | | | | | | |
| Flt Protected | 0.950 | | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 1770 | 3539 | 0 | 0 | | |
| Flt Permitted | 0.950 | | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 1770 | 3539 | 0 | 0 | | |
| Right Turn on Red | | Yes | | | | Yes | | |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (mph) | 30 | | | 40 | 40 | | | |
| Link Distance (ft) | 110 | | | 162 | 902 | | | |
| Travel Time (s) | 2.5 | | | 2.8 | 15.4 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | | |
| Adj. Flow (vph) | 115 | 0 | 88 | 1008 | 0 | 0 | | |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 115 | 0 | 88 | 1008 | 0 | 0 | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | | |
| Median Width(ft) | 24 | | | 12 | 12 | | | |
| Link Offset(ft) | 0 | | | 0 | 0 | | | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | | | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 | | |
| Turn Type | NA | | Prot | NA | | | | |
| Protected Phases | 4 | | 15 | 2 | | | 6 | 8 |
| Permitted Phases | | | | | | | | |
| Minimum Split (s) | 11.0 | | 10.0 | 10.0 | | | 10.0 | 11.0 |
| Total Split (s) | 13.0 | | 20.0 | 101.0 | | | 101.0 | 11.0 |
| Total Split (%) | 9.0% | | 13.8% | 69.7% | | | 70% | 8% |
| Maximum Green (s) | 7.0 | | 14.0 | 95.0 | | | 95.0 | 5.0 |
| Yellow Time (s) | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | | | | |
| Total Lost Time (s) | 6.0 | | 6.0 | 6.0 | | | | |
| Lead/Lag | Lead | | | | | | Lag | |
| Lead-Lag Optimize? | Yes | | | | | | Yes | |
| Act Effect Green (s) | 7.0 | | 14.0 | 95.0 | | | | |
| Actuated g/C Ratio | 0.05 | | 0.10 | 0.66 | | | | |
| v/c Ratio | 0.70 | | 0.52 | 0.43 | | | | |
| Control Delay | 44.2 | | 73.8 | 12.8 | | | | |
| Queue Delay | 2.1 | | 0.0 | 0.0 | | | | |
| Total Delay | 46.3 | | 73.8 | 12.8 | | | | |
| LOS | D | | E | B | | | | |
| Approach Delay | 46.3 | | | 17.7 | | | | |
| Approach LOS | D | | | B | | | | |

Year 2020 No-Build
 88: Kingwood Dr. & Kingwood High School

AM Peak Hour

Intersection Summary

Area Type: Other
 Cycle Length: 145
 Actuated Cycle Length: 145
 Offset: 0 (0%), Referenced to phase 2:NET and 6:, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 20.4 Intersection LOS: C
 Intersection Capacity Utilization 39.8% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 88: Kingwood Dr. & Kingwood High School





| Lane Group | EBU | EBL | SBL | SBR | SWR |
|----------------------------|------|-------|------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 0 | 893 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | | 100 | 0 | 0 | 0 |
| Storage Lanes | | 2 | 0 | 0 | 0 |
| Taper Length (ft) | | 25 | 25 | | |
| Lane Util. Factor | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | |
| Flt Protected | | 0.950 | | | |
| Satd. Flow (prot) | 1863 | 3433 | 0 | 0 | 0 |
| Flt Permitted | | 0.950 | | | |
| Satd. Flow (perm) | 1863 | 3433 | 0 | 0 | 0 |
| Link Speed (mph) | | 40 | 30 | | 40 |
| Link Distance (ft) | | 380 | 137 | | 162 |
| Travel Time (s) | | 6.5 | 3.1 | | 2.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 1097 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | |
| Lane Group Flow (vph) | 0 | 1097 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | R NA | Left | Left | Right | Right |
| Median Width(ft) | | 36 | 0 | | 0 |
| Link Offset(ft) | | 0 | 0 | | 0 |
| Crosswalk Width(ft) | | 16 | 16 | | 16 |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | 15 | 15 | 9 | 9 |
| Sign Control | | Free | Stop | | Free |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

| Lane Group | ø1 | ø6 |
|----------------------------|----|----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |

91: Lake Kingwood Trail & Kingwood Dr.

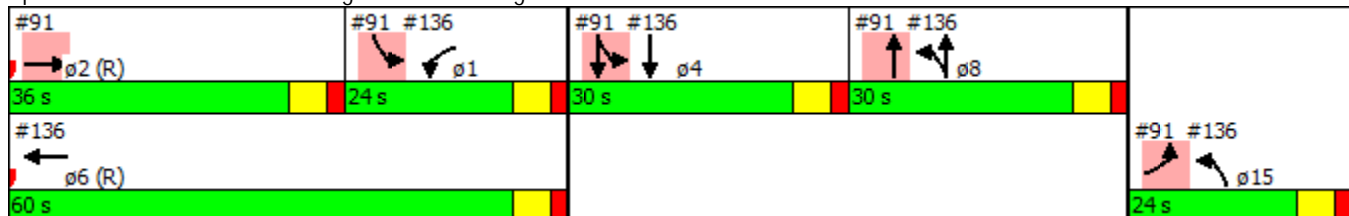


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-----|-------|-----|
| Detector Phase | 15 | 2 | | | | | | 8 | | 14 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 4.0 | | | | | | 5.0 | | | 5.0 | |
| Minimum Split (s) | 11.0 | 20.0 | | | | | | 19.0 | | | 11.0 | |
| Total Split (s) | 24.0 | 36.0 | | | | | | 30.0 | | | 30.0 | |
| Total Split (%) | 16.7% | 25.0% | | | | | | 20.8% | | | 20.8% | |
| Maximum Green (s) | 18.0 | 30.0 | | | | | | 24.0 | | | 24.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | 6.0 | | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lag | | | Lead | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | | | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | | 3.0 | |
| Recall Mode | None | C-Max | | | | | | None | | | None | |
| Walk Time (s) | | 4.0 | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | 10.0 | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | 6.8 | 78.5 | | | | | | 7.9 | | | 34.0 | |
| Actuated g/C Ratio | 0.05 | 0.55 | | | | | | 0.05 | | | 0.24 | |
| v/c Ratio | 0.17 | 0.54 | | | | | | 0.40 | | | 0.14 | |
| Control Delay | 69.8 | 24.0 | | | | | | 48.8 | | | 2.4 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | | 0.2 | |
| Total Delay | 69.8 | 24.0 | | | | | | 48.8 | | | 2.6 | |
| LOS | E | C | | | | | | D | | | A | |
| Approach Delay | | 24.6 | | | | | | 48.8 | | | 2.6 | |
| Approach LOS | | C | | | | | | D | | | A | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 24.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 47.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 91: Lake Kingwood Trail & Kingwood Dr.



| Lane Group | ø1 | ø6 |
|-------------------------|------|-------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 5.0 | 4.0 |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 24.0 | 60.0 |
| Total Split (%) | 17% | 42% |
| Maximum Green (s) | 18.0 | 54.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | None | C-Max |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

| Lane Group | ø1 | ø6 |
|----------------------------|----|----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |

Year 2020 No-Build
 96: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

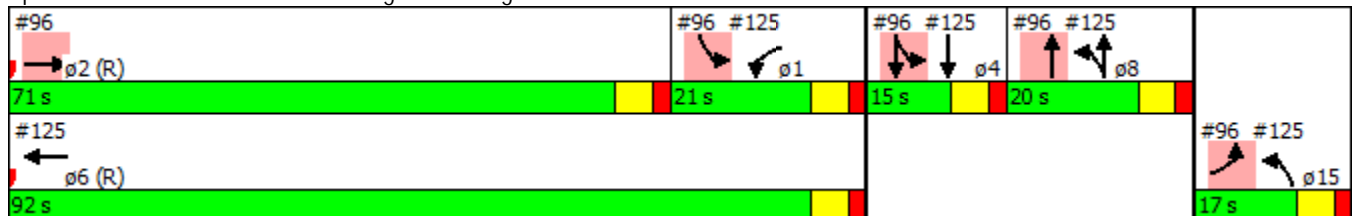


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-------|-----|-----|-------|-----|
| Detector Phase | 15 | 2 | | | | | | 8 | | 14 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 4.0 | | | | | | 5.0 | | | 5.0 | |
| Minimum Split (s) | 11.0 | 20.0 | | | | | | 19.0 | | | 11.0 | |
| Total Split (s) | 17.0 | 71.0 | | | | | | 20.0 | | | 15.0 | |
| Total Split (%) | 11.8% | 49.3% | | | | | | 13.9% | | | 10.4% | |
| Maximum Green (s) | 11.0 | 65.0 | | | | | | 14.0 | | | 9.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | | | | | 6.0 | | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lag | | | Lead | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | | | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | | 3.0 | |
| Recall Mode | None | C-Max | | | | | | None | | | None | |
| Walk Time (s) | | 4.0 | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | 10.0 | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | 10.9 | 65.1 | | | | | | 14.3 | | | 29.7 | |
| Actuated g/C Ratio | 0.08 | 0.45 | | | | | | 0.10 | | | 0.21 | |
| v/c Ratio | 0.85 | 0.60 | | | | | | 0.97 | | | 0.40 | |
| Control Delay | 110.7 | 31.3 | | | | | | 114.5 | | | 10.8 | |
| Queue Delay | 0.0 | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | 110.7 | 31.3 | | | | | | 114.5 | | | 10.8 | |
| LOS | F | C | | | | | | F | | | B | |
| Approach Delay | | 39.9 | | | | | | 114.5 | | | 10.8 | |
| Approach LOS | | D | | | | | | F | | | B | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 20 (14%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 46.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 56.3% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 96: Chestnut Ridge Dr. & Kingwood Dr.



| Lane Group | ø1 | ø6 |
|-------------------------|------|-------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 5.0 | 4.0 |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 21.0 | 92.0 |
| Total Split (%) | 15% | 64% |
| Maximum Green (s) | 15.0 | 86.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | None | C-Max |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | WBL | WBR | NET | NER | SWL | SWT |
|----------------------------|-------|-------|------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 1863 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 1863 | 0 | 0 | 0 | 0 | 3539 |
| Link Speed (mph) | 30 | | 40 | | | 40 |
| Link Distance (ft) | 137 | | 129 | | | 202 |
| Travel Time (s) | 3.1 | | 2.2 | | | 3.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 0 | | | 0 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Yield | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.8% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| Lane Group | ø1 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | | | | | | | | | | | |
| Ideal Flow (vphpl) | | | | | | | | | | | |
| Lane Util. Factor | | | | | | | | | | | |
| Frt | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | |
| Satd. Flow (prot) | | | | | | | | | | | |
| Flt Permitted | | | | | | | | | | | |
| Satd. Flow (perm) | | | | | | | | | | | |
| Right Turn on Red | | | | | | | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | | | | | | | | | | |
| Link Distance (ft) | | | | | | | | | | | |
| Travel Time (s) | | | | | | | | | | | |
| Peak Hour Factor | | | | | | | | | | | |
| Growth Factor | | | | | | | | | | | |
| Adj. Flow (vph) | | | | | | | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | | | | | | | | | | | |
| Enter Blocked Intersection | | | | | | | | | | | |
| Lane Alignment | | | | | | | | | | | |
| Median Width(ft) | | | | | | | | | | | |
| Link Offset(ft) | | | | | | | | | | | |
| Crosswalk Width(ft) | | | | | | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | | | | | | | | | | | |
| Turning Speed (mph) | | | | | | | | | | | |
| Number of Detectors | | | | | | | | | | | |
| Detector Template | | | | | | | | | | | |
| Leading Detector (ft) | | | | | | | | | | | |
| Trailing Detector (ft) | | | | | | | | | | | |
| Detector 1 Position(ft) | | | | | | | | | | | |
| Detector 1 Size(ft) | | | | | | | | | | | |
| Detector 1 Type | | | | | | | | | | | |
| Detector 1 Channel | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | | | | | | | | |
| Detector 1 Queue (s) | | | | | | | | | | | |
| Detector 1 Delay (s) | | | | | | | | | | | |
| Detector 2 Position(ft) | | | | | | | | | | | |
| Detector 2 Size(ft) | | | | | | | | | | | |
| Detector 2 Type | | | | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | | | | | | | |
| Turn Type | | | | | | | | | | | |
| Protected Phases | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 11 | 15 | 16 | 21 |
| Permitted Phases | | | | | | | | | | | |
| Detector Phase | | | | | | | | | | | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 1.0 | 5.0 | 3.0 | 8.0 | 1.0 | 1.0 | 3.0 | 3.0 | 4.0 | 1.0 |

Year 2020 No-Build
 104: US 59 SBFR & Kingwood Dr.

AM Peak Hour

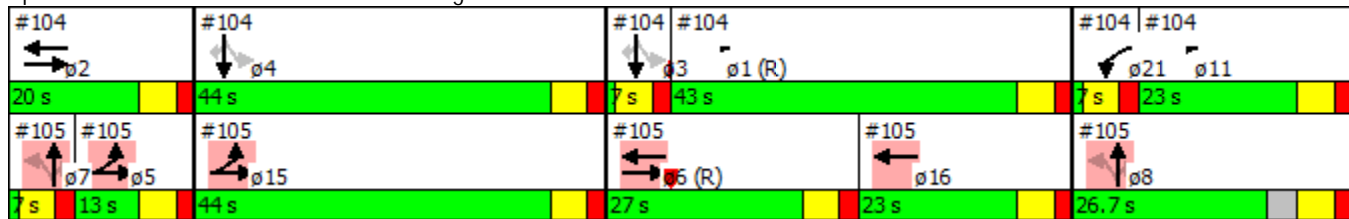


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-------|-----|------|------|-----|-----|-----|-----|-------|------|------|
| Minimum Split (s) | | 13.0 | | | | | | | | | | |
| Total Split (s) | | 20.0 | | | | | | | | | | |
| Total Split (%) | | 13.9% | | | | | | | | | | |
| Maximum Green (s) | | 14.0 | | | | | | | | | | |
| Yellow Time (s) | | 4.0 | | | | | | | | | | |
| All-Red Time (s) | | 2.0 | | | | | | | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | | | |
| Recall Mode | | None | | | | | | | | | | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effect Green (s) | | 14.0 | | 69.5 | 76.5 | | | | | 42.5 | 42.5 | 42.5 |
| Actuated g/C Ratio | | 0.10 | | 0.48 | 0.53 | | | | | 0.30 | 0.30 | 0.30 |
| v/c Ratio | | 0.52 | | 1.12 | 0.49 | | | | | 0.52 | 0.53 | 0.35 |
| Control Delay | | 51.4 | | 75.3 | 2.5 | | | | | 46.3 | 40.6 | 3.3 |
| Queue Delay | | 0.0 | | 0.5 | 1.1 | | | | | 70.8 | 55.5 | 4.0 |
| Total Delay | | 51.4 | | 75.8 | 3.6 | | | | | 117.1 | 96.1 | 7.3 |
| LOS | | D | | E | A | | | | | F | F | A |
| Approach Delay | | 51.4 | | | 51.8 | | | | | | 84.4 | |
| Approach LOS | | D | | | D | | | | | | F | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 1:WBTL and 6:, Start of Green |
| Natural Cycle: | 95 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.12 |
| Intersection Signal Delay: | 60.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 80.0% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 104: US 59 SBFR & Kingwood Dr.



| Lane Group | ø1 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 |
|-----------------------------|-------|------|------|------|-------|------|------|------|------|------|------|
| Minimum Split (s) | 9.0 | 7.0 | 11.7 | 9.0 | 26.0 | 7.0 | 26.7 | 9.0 | 9.0 | 10.0 | 7.0 |
| Total Split (s) | 43.0 | 7.0 | 44.0 | 13.0 | 27.0 | 7.0 | 26.7 | 23.0 | 44.0 | 23.0 | 7.0 |
| Total Split (%) | 30% | 5% | 31% | 9% | 19% | 5% | 19% | 16% | 31% | 16% | 5% |
| Maximum Green (s) | 37.0 | 1.0 | 38.0 | 7.0 | 21.0 | 1.0 | 20.7 | 17.0 | 38.0 | 17.0 | 1.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | |
| Lead/Lag | Lag | Lead | | Lag | Lead | Lead | | Lag | | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | Yes | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | C-Max | None | None | None | C-Max | Max | None | None | None | None | None |
| Walk Time (s) | | | | | 5.0 | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | 15.0 | | 14.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | 0 | | | | |
| Act Effect Green (s) | | | | | | | | | | | |
| Actuated g/C Ratio | | | | | | | | | | | |
| v/c Ratio | | | | | | | | | | | |
| Control Delay | | | | | | | | | | | |
| Queue Delay | | | | | | | | | | | |
| Total Delay | | | | | | | | | | | |
| LOS | | | | | | | | | | | |
| Approach Delay | | | | | | | | | | | |
| Approach LOS | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | |

| Lane Group | ø1 | ø2 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | | | | | | | | | | | | |
| Ideal Flow (vphpl) | | | | | | | | | | | | |
| Lane Util. Factor | | | | | | | | | | | | |
| Frt | | | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | | | | | | | | | | | | |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | | | | | | | | | | | | |
| Right Turn on Red | | | | | | | | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | | | | | | | | | | | |
| Link Distance (ft) | | | | | | | | | | | | |
| Travel Time (s) | | | | | | | | | | | | |
| Peak Hour Factor | | | | | | | | | | | | |
| Growth Factor | | | | | | | | | | | | |
| Adj. Flow (vph) | | | | | | | | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | | | | | | | | | | | | |
| Enter Blocked Intersection | | | | | | | | | | | | |
| Lane Alignment | | | | | | | | | | | | |
| Median Width(ft) | | | | | | | | | | | | |
| Link Offset(ft) | | | | | | | | | | | | |
| Crosswalk Width(ft) | | | | | | | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | | | | | | | | | | | | |
| Turning Speed (mph) | | | | | | | | | | | | |
| Number of Detectors | | | | | | | | | | | | |
| Detector Template | | | | | | | | | | | | |
| Leading Detector (ft) | | | | | | | | | | | | |
| Trailing Detector (ft) | | | | | | | | | | | | |
| Detector 1 Position(ft) | | | | | | | | | | | | |
| Detector 1 Size(ft) | | | | | | | | | | | | |
| Detector 1 Type | | | | | | | | | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | | | | | | | | | |
| Detector 1 Queue (s) | | | | | | | | | | | | |
| Detector 1 Delay (s) | | | | | | | | | | | | |
| Detector 2 Position(ft) | | | | | | | | | | | | |
| Detector 2 Size(ft) | | | | | | | | | | | | |
| Detector 2 Type | | | | | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | | | | | | | | |
| Turn Type | | | | | | | | | | | | |
| Protected Phases | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 11 | 15 | 16 | 21 |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | | | | | | | | | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 7.0 | 1.0 | 5.0 | 3.0 | 8.0 | 1.0 | 1.0 | 3.0 | 3.0 | 4.0 | 1.0 |

Year 2020 No-Build
 105: US 59 NBFR & Kingwood Dr.

AM Peak Hour

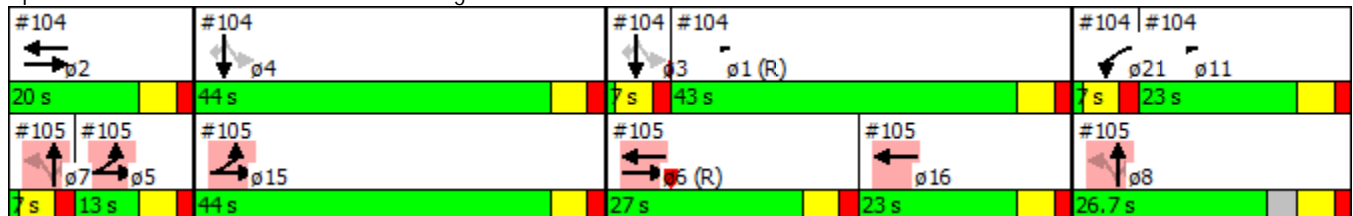


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-----|-----|------|-----|-------|-------|------|-----|-----|-----|
| Minimum Split (s) | | | | | | | | | | | | |
| Total Split (s) | | | | | | | | | | | | |
| Total Split (%) | | | | | | | | | | | | |
| Maximum Green (s) | | | | | | | | | | | | |
| Yellow Time (s) | | | | | | | | | | | | |
| All-Red Time (s) | | | | | | | | | | | | |
| Lost Time Adjust (s) | | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | | | | | | | | | |
| Recall Mode | | | | | | | | | | | | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 42.8 | 78.0 | | | 52.2 | | 31.0 | 31.0 | 31.0 | | | |
| Actuated g/C Ratio | 0.30 | 0.54 | | | 0.36 | | 0.22 | 0.22 | 0.22 | | | |
| v/c Ratio | 0.09 | 0.29 | | | 1.03 | | 0.85 | 0.40 | 0.54 | | | |
| Control Delay | 10.7 | 2.8 | | | 68.5 | | 77.8 | 49.9 | 5.6 | | | |
| Queue Delay | 0.0 | 0.5 | | | 28.0 | | 62.4 | 50.6 | 1.8 | | | |
| Total Delay | 10.7 | 3.2 | | | 96.5 | | 140.2 | 100.5 | 7.4 | | | |
| LOS | B | A | | | F | | F | F | A | | | |
| Approach Delay | | 4.3 | | | 96.5 | | | 67.4 | | | | |
| Approach LOS | | A | | | F | | | E | | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 1:WBTL and 6:, Start of Green |
| Natural Cycle: | 95 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.12 |
| Intersection Signal Delay: | 73.9 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 80.0% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 105: US 59 NBFR & Kingwood Dr.



| Lane Group | ø1 | ø2 | ø3 | ø4 | ø5 | ø6 | ø7 | ø8 | ø11 | ø15 | ø16 | ø21 |
|-------------------------|-------|------|------|------|------|-------|------|------|------|------|------|------|
| Minimum Split (s) | 9.0 | 13.0 | 7.0 | 11.7 | 9.0 | 26.0 | 7.0 | 26.7 | 9.0 | 9.0 | 10.0 | 7.0 |
| Total Split (s) | 43.0 | 20.0 | 7.0 | 44.0 | 13.0 | 27.0 | 7.0 | 26.7 | 23.0 | 44.0 | 23.0 | 7.0 |
| Total Split (%) | 30% | 14% | 5% | 31% | 9% | 19% | 5% | 19% | 16% | 31% | 16% | 5% |
| Maximum Green (s) | 37.0 | 14.0 | 1.0 | 38.0 | 7.0 | 21.0 | 1.0 | 20.7 | 17.0 | 38.0 | 17.0 | 1.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (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 |
| Lost Time Adjust (s) | | | | | | | | | | | | |
| Total Lost Time (s) | | | | | | | | | | | | |
| Lead/Lag | Lag | | Lead | | Lag | Lead | Lead | | Lag | | Lag | Lead |
| Lead-Lag Optimize? | Yes | | Yes | | Yes | Yes | Yes | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | C-Max | None | None | None | None | C-Max | Max | None | None | None | None | None |
| Walk Time (s) | | | | | | 5.0 | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | | 15.0 | | 14.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | | 0 | | 0 | | | | |
| Act Effect Green (s) | | | | | | | | | | | | |
| Actuated g/C Ratio | | | | | | | | | | | | |
| v/c Ratio | | | | | | | | | | | | |
| Control Delay | | | | | | | | | | | | |
| Queue Delay | | | | | | | | | | | | |
| Total Delay | | | | | | | | | | | | |
| LOS | | | | | | | | | | | | |
| Approach Delay | | | | | | | | | | | | |
| Approach LOS | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 10 | 245 | 114 | 17 | 56 | 162 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.870 | | 0.982 | | | |
| Flt Protected | 0.998 | | | | | 0.987 |
| Satd. Flow (prot) | 1617 | 0 | 1829 | 0 | 0 | 1839 |
| Flt Permitted | 0.998 | | | | | 0.987 |
| Satd. Flow (perm) | 1617 | 0 | 1829 | 0 | 0 | 1839 |
| Link Speed (mph) | 40 | | 35 | | | 35 |
| Link Distance (ft) | 2012 | | 3652 | | | 1853 |
| Travel Time (s) | 34.3 | | 71.1 | | | 36.1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 12 | 301 | 140 | 21 | 69 | 199 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 313 | 0 | 161 | 0 | 0 | 268 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 0 | | | 0 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Stop | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.8% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
110: Hidden Pines & Northpark Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | ↗ | ↘ | ↑ | |
| Volume (vph) | 42 | 875 | 49 | 0 | 0 | 0 | 0 | 125 | 65 | 32 | 62 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.992 | | | | | | | 0.850 | | | |
| Flt Protected | | 0.998 | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3504 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Flt Permitted | | 0.998 | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3504 | 0 | 0 | 0 | 0 | 0 | 1863 | 1583 | 1770 | 1863 | 0 |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 2967 | | | 1422 | | | 1041 | | | 125 | |
| Travel Time (s) | | 45.0 | | | 21.5 | | | 23.7 | | | 2.8 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 52 | 1075 | 60 | 0 | 0 | 0 | 0 | 154 | 80 | 39 | 76 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1187 | 0 | 0 | 0 | 0 | 0 | 154 | 80 | 39 | 76 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 112.9% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Year 2020 No-Build
111: Lake Houston Parkway & Rustic Woods

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | ↕ | ↕↕ | | | | |
| Volume (vph) | 24 | 33 | 0 | 0 | 131 | 28 | 72 | 854 | 30 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.974 | | | 0.995 | | | | |
| Flt Protected | | 0.980 | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 3468 | 0 | 0 | 3447 | 0 | 1770 | 3522 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.980 | | | | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 3468 | 0 | 0 | 3447 | 0 | 1770 | 3522 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 14 | | | 3 | | | | |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | | 40 |
| Link Distance (ft) | | 82 | | | 559 | | | 1308 | | | | 4598 |
| Travel Time (s) | | 1.9 | | | 12.7 | | | 22.3 | | | | 78.4 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 29 | 41 | 0 | 0 | 161 | 34 | 88 | 1049 | 37 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 70 | 0 | 0 | 195 | 0 | 88 | 1086 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Prot | NA | | | NA | | Prot | NA | | | | |
| Protected Phases | 14 | 4 | | | 8 | | 15 | 2 | | | | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 11.0 | | | 19.0 | | 11.0 | 20.0 | | | | |
| Total Split (s) | | 17.0 | | | 21.0 | | 22.0 | 71.0 | | | | |
| Total Split (%) | | 11.8% | | | 14.6% | | 15.3% | 49.3% | | | | |
| Maximum Green (s) | | 11.0 | | | 15.0 | | 16.0 | 65.0 | | | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | 2.0 | | | 2.0 | | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | 6.0 | 6.0 | | | | |
| Lead/Lag | | Lead | | | Lag | | | Lead | | | | |
| Lead-Lag Optimize? | | Yes | | | Yes | | | Yes | | | | |
| Walk Time (s) | | | | | 6.0 | | | 4.0 | | | | |
| Flash Dont Walk (s) | | | | | 7.0 | | | 10.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | | 24.0 | | | 15.0 | | 16.0 | 65.0 | | | | |
| Actuated g/C Ratio | | 0.17 | | | 0.10 | | 0.11 | 0.45 | | | | |
| v/c Ratio | | 0.12 | | | 0.53 | | 0.45 | 0.68 | | | | |

| Lane Group | ø1 | ø6 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |
| Minimum Split (s) | 11.0 | 10.0 |
| Total Split (s) | 13.0 | 84.0 |
| Total Split (%) | 9% | 58% |
| Maximum Green (s) | 7.0 | 78.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | | |
| Flash Dont Walk (s) | | |
| Pedestrian Calls (#/hr) | | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
 111: Lake Houston Parkway & Rustic Woods

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|------|-----|-----|------|-----|------|------|-----|-----|-----|-----|
| Control Delay | | 27.0 | | | 62.2 | | 67.8 | 34.0 | | | | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | | |
| Total Delay | | 27.0 | | | 62.2 | | 67.8 | 34.0 | | | | |
| LOS | | C | | | E | | E | C | | | | |
| Approach Delay | | 27.0 | | | 62.2 | | | 36.5 | | | | |
| Approach LOS | | C | | | E | | | D | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 90 (63%), Referenced to phase 2:NBT and 6:, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.71 |
| Intersection Signal Delay: | 39.5 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 52.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 111: Lake Houston Parkway & Rustic Woods

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| #111 ↑ ϕ2 (R) 71 s | #111#175 ↗ ϕ1 13 s | #111#175 ↘ ϕ4 17 s | #111#175 ← ϕ8 21 s | |
| #175 ↓ ϕ6 (R) 84 s | | | | #111#175 ↙ ϕ15 22 s |

| Lane Group | ø1 | ø6 |
|----------------------|----|----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
115: Loop 494 & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 653 | 95 | 161 | 1707 | 66 | 16 | 41 | 264 | 88 | 168 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 150 | 160 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.981 | | | 0.994 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 3472 | 0 | 1770 | 3518 | 0 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.050 | | | 0.213 | | | 0.423 | | | 0.680 | | |
| Satd. Flow (perm) | 93 | 3472 | 0 | 397 | 3518 | 0 | 788 | 1863 | 1583 | 1267 | 1863 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 18 | | | 5 | | | | 242 | | | 159 |
| Link Speed (mph) | | 40 | | | 40 | | | 45 | | | | 45 |
| Link Distance (ft) | | 1514 | | | 523 | | | 675 | | | | 922 |
| Travel Time (s) | | 25.8 | | | 8.9 | | | 10.2 | | | | 14.0 |
| 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 |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% |
| Adj. Flow (vph) | 8 | 830 | 121 | 205 | 2171 | 84 | 20 | 52 | 336 | 112 | 214 | 285 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 8 | 951 | 0 | 205 | 2255 | 0 | 20 | 52 | 336 | 112 | 214 | 285 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | 4 |

Year 2020 No-Build
115: Loop 494 & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-----|-------|-------|-----|------|-------|-------|------|-------|-------|
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 10.0 | 22.0 | | 10.0 | 22.0 | | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 |
| Total Split (s) | 10.0 | 85.0 | | 20.0 | 95.0 | | 10.0 | 29.0 | 29.0 | 10.0 | 29.0 | 29.0 |
| Total Split (%) | 6.9% | 59.0% | | 13.9% | 66.0% | | 6.9% | 20.1% | 20.1% | 6.9% | 20.1% | 20.1% |
| Maximum Green (s) | 4.0 | 79.0 | | 14.0 | 89.0 | | 4.0 | 23.0 | 23.0 | 4.0 | 23.0 | 23.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | | None | C-Max | | None | Max | Max | None | Max | Max |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 85.7 | 81.7 | | 99.0 | 97.0 | | 27.0 | 23.0 | 23.0 | 29.4 | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.60 | 0.57 | | 0.69 | 0.67 | | 0.19 | 0.16 | 0.16 | 0.20 | 0.19 | 0.19 |
| v/c Ratio | 0.08 | 0.48 | | 0.54 | 0.95 | | 0.11 | 0.18 | 0.74 | 0.41 | 0.61 | 0.67 |
| Control Delay | 14.3 | 26.1 | | 15.4 | 39.4 | | 45.1 | 54.1 | 27.1 | 53.8 | 63.5 | 33.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 44.9 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.3 | 26.1 | | 15.4 | 84.3 | | 45.1 | 54.1 | 27.1 | 53.8 | 63.5 | 33.0 |
| LOS | B | C | | B | F | | D | D | C | D | E | C |
| Approach Delay | | 26.0 | | | 78.6 | | | 31.4 | | | 47.5 | |
| Approach LOS | | C | | | E | | | C | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 49 (34%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 58.6
 Intersection LOS: E
 Intersection Capacity Utilization 92.2%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 115: Loop 494 & Kingwood Dr.



Year 2020 No-Build
 118: Royal Forest /Royal Forest & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 138 | 823 | 44 | 18 | 1813 | 18 | 33 | 5 | 8 | 1 | 2 | 88 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 150 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.850 | | 0.999 | | | | 0.850 | | 0.870 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.958 | | | | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3536 | 0 | 0 | 1785 | 1583 | 0 | 1621 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.474 | | | 0.998 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 3536 | 0 | 0 | 883 | 1583 | 0 | 1617 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 68 | | 1 | | | | 114 | | 112 | |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | 30 | |
| Link Distance (ft) | | 523 | | | 284 | | | 392 | | | 750 | |
| Travel Time (s) | | 8.9 | | | 4.8 | | | 8.9 | | | 17.0 | |
| 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 |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% |
| Adj. Flow (vph) | 176 | 1047 | 56 | 23 | 2306 | 23 | 42 | 6 | 10 | 1 | 3 | 112 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 176 | 1047 | 56 | 23 | 2329 | 0 | 0 | 48 | 10 | 0 | 116 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | | 20 | 6 | 20 | 20 | 6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(ft) | | 94 | | | 94 | | | 94 | | | 94 | |
| Detector 2 Size(ft) | | 6 | | | 6 | | | 6 | | | 6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | | | 2 | | | | 8 | | 8 | 4 | | |

Year 2020 No-Build
 118: Royal Forest /Royal Forest & Kingwood Dr.

AM Peak Hour

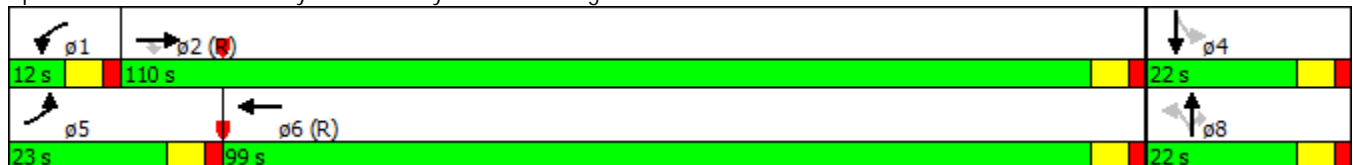


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|------|-------|-----|-------|-------|-------|-------|-------|-----|
| Detector Phase | 5 | 2 | 2 | 1 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | |
| Total Split (s) | 23.0 | 110.0 | 110.0 | 12.0 | 99.0 | | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | |
| Total Split (%) | 16.0% | 76.4% | 76.4% | 8.3% | 68.8% | | 15.3% | 15.3% | 15.3% | 15.3% | 15.3% | |
| Maximum Green (s) | 17.0 | 104.0 | 104.0 | 6.0 | 93.0 | | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | | | 6.0 | |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | C-Max | C-Max | None | C-Max | | None | None | None | Max | Max | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Act Effect Green (s) | 16.4 | 108.8 | 108.8 | 5.9 | 93.6 | | 16.0 | 16.0 | | | 16.0 | |
| Actuated g/C Ratio | 0.11 | 0.76 | 0.76 | 0.04 | 0.65 | | 0.11 | 0.11 | | | 0.11 | |
| v/c Ratio | 0.88 | 0.39 | 0.05 | 0.32 | 1.01 | | 0.49 | 0.04 | | | 0.42 | |
| Control Delay | 89.1 | 12.9 | 4.6 | 78.3 | 58.9 | | 78.0 | 0.2 | | | 15.6 | |
| Queue Delay | 0.0 | 0.5 | 0.0 | 0.0 | 34.5 | | 2.8 | 0.0 | | | 0.9 | |
| Total Delay | 89.1 | 13.3 | 4.6 | 78.3 | 93.4 | | 80.8 | 0.2 | | | 16.6 | |
| LOS | F | B | A | E | F | | F | A | | | B | |
| Approach Delay | | 23.4 | | | 93.3 | | 66.9 | | | | 16.6 | |
| Approach LOS | | C | | | F | | E | | | | B | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 100 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 67.0
 Intersection LOS: E
 Intersection Capacity Utilization 92.4%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 118: Royal Forest /Royal Forest & Kingwood Dr.





| Lane Group | NBT | NBR | SBU | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|--------|------|--------|------|-------|
| Lane Configurations | | | ↻ | | ↑↑↑↑ | | |
| Volume (vph) | 0 | 0 | 104 | 0 | 918 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.81 | 1.00 | 1.00 |
| Frt | | | | | | | |
| Flt Protected | | | 0.950 | | | | |
| Satd. Flow (prot) | 0 | 0 | 1770 | 0 | 7544 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | | |
| Satd. Flow (perm) | 0 | 0 | 1770 | 0 | 7544 | 0 | 0 |
| Right Turn on Red | | Yes | | Yes | | Yes | Yes |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (mph) | 55 | | | | 55 | 30 | |
| Link Distance (ft) | 202 | | | | 6181 | 296 | |
| Travel Time (s) | 2.5 | | | | 76.6 | 6.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 128 | 0 | 1128 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 128 | 0 | 1128 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | R NA | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | | 12 | 0 | |
| Link Offset(ft) | 0 | | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 9 | 15 | | 15 | 9 |
| Turn Type | | | Perm | | NA | | |
| Protected Phases | | | | | 6 | | |
| Permitted Phases | | | 6 | | | | |
| Minimum Split (s) | | | 22.0 | | 22.0 | | |
| Total Split (s) | | | 22.0 | | 22.0 | | |
| Total Split (%) | | | 100.0% | | 100.0% | | |
| Maximum Green (s) | | | 16.0 | | 16.0 | | |
| Yellow Time (s) | | | 4.0 | | 4.0 | | |
| All-Red Time (s) | | | 2.0 | | 2.0 | | |
| Lost Time Adjust (s) | | | 0.0 | | 0.0 | | |
| Total Lost Time (s) | | | 6.0 | | 6.0 | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | 5.0 | | 5.0 | | |
| Flash Dont Walk (s) | | | 11.0 | | 11.0 | | |
| Pedestrian Calls (#/hr) | | | 0 | | 0 | | |
| Act Effect Green (s) | | | 22.0 | | 22.0 | | |
| Actuated g/C Ratio | | | 1.00 | | 1.00 | | |
| v/c Ratio | | | 0.07 | | 0.15 | | |
| Control Delay | | | 0.1 | | 0.0 | | |
| Queue Delay | | | 0.0 | | 0.0 | | |
| Total Delay | | | 0.1 | | 0.0 | | |



| Lane Group | NBT | NBR | SBU | SBL | SBT | NWL | NWR |
|----------------|-----|-----|-----|-----|-----|-----|-----|
| LOS | | | A | | A | | |
| Approach Delay | | | | | 0.0 | | |
| Approach LOS | | | | | A | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 22 |
| Actuated Cycle Length: | 22 |
| Offset: | 0 (0%), Referenced to phase 2: and 6:SBTU, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.15 |
| Intersection Signal Delay: | 0.0 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 46.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 121: US 59 SBFR





| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 104 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | Yes | Yes | | | | Yes |
| Satd. Flow (RTOR) | 1091 | | | | | |
| Link Speed (mph) | 30 | | | 55 | 55 | |
| Link Distance (ft) | 296 | | | 199 | 6172 | |
| Travel Time (s) | 6.7 | | | 2.5 | 76.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 128 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 128 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | 0 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | 15 | | | 9 |
| Turn Type | NA | | | | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 22.0 | | | 22.0 | | |
| Total Split (s) | 22.0 | | | 22.0 | | |
| Total Split (%) | 50.0% | | | 50.0% | | |
| Maximum Green (s) | 16.0 | | | 16.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 2.0 | | | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 6.0 | | | 6.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | | | |
| Actuated g/C Ratio | 0.36 | | | | | |
| v/c Ratio | 0.10 | | | | | |
| Control Delay | 0.1 | | | | | |
| Queue Delay | 0.0 | | | | | |
| Total Delay | 0.1 | | | | | |

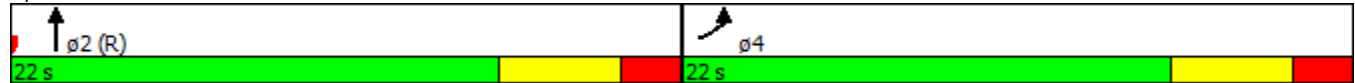


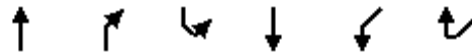
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------|-----|-----|-----|-----|-----|-----|
| LOS | A | | | | | |
| Approach Delay | 0.1 | | | | | |
| Approach LOS | A | | | | | |

Intersection Summary

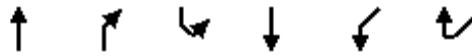
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 44 |
| Actuated Cycle Length: | 44 |
| Offset: | 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.10 |
| Intersection Signal Delay: | 0.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 19.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 122: US 59 NBFR





| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↓ | |
| Volume (vph) | 0 | 0 | 0 | 1888 | 317 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5085 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5085 | 1770 | 0 |
| Right Turn on Red | | Yes | | | Yes | Yes |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 55 | | | 55 | 30 | |
| Link Distance (ft) | 6715 | | | 184 | 304 | |
| Travel Time (s) | 83.2 | | | 2.3 | 6.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2319 | 389 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2319 | 389 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 0 | | | 0 | 12 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 22.0 | 22.0 | |
| Total Split (s) | | | | 22.0 | 22.0 | |
| Total Split (%) | | | | 50.0% | 50.0% | |
| Maximum Green (s) | | | | 16.0 | 16.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effect Green (s) | | | | 16.0 | 16.0 | |
| Actuated g/C Ratio | | | | 0.36 | 0.36 | |
| v/c Ratio | | | | 1.25 | 0.60 | |
| Control Delay | | | | 137.8 | 16.3 | |
| Queue Delay | | | | 0.9 | 0.0 | |
| Total Delay | | | | 138.7 | 16.3 | |

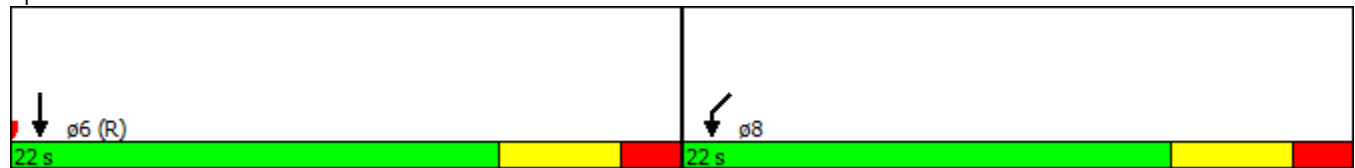


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------|-----|-----|-----|-------|------|-----|
| LOS | | | | F | B | |
| Approach Delay | | | | 138.7 | 16.3 | |
| Approach LOS | | | | F | B | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 44 |
| Actuated Cycle Length: | 44 |
| Offset: | 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.25 |
| Intersection Signal Delay: | 121.1 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 62.2% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 123: US 59 SBFR





| Lane Group | NBU | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|----------|------|----------|------|-------|------|-------|
| Lane Configurations | A | | B | | | | |
| Volume (vph) | 317 | 0 | 1002 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.76 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | | |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 8494 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 8494 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | Yes | | | Yes | Yes | Yes |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (mph) | | | 55 | 55 | | 30 | |
| Link Distance (ft) | | | 423 | 180 | | 304 | |
| Travel Time (s) | | | 5.2 | 2.2 | | 6.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 389 | 0 | 1231 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 389 | 0 | 1231 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No |
| Lane Alignment | R NA | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | | 12 | 12 | | 0 | |
| Link Offset(ft) | | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | 15 | | | 9 | 15 | 9 |
| Turn Type | Perm | | NA | | | | |
| Protected Phases | | | 2 | | | | |
| Permitted Phases | 2 | | | | | | |
| Minimum Split (s) | 22.0 | | 22.0 | | | | |
| Total Split (s) | 22.0 | | 22.0 | | | | |
| Total Split (%) | 100.0% | | 100.0% | | | | |
| Maximum Green (s) | 16.0 | | 16.0 | | | | |
| Yellow Time (s) | 4.0 | | 4.0 | | | | |
| All-Red Time (s) | 2.0 | | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | 6.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | | | | |
| Act Effect Green (s) | 22.0 | | 22.0 | | | | |
| Actuated g/C Ratio | 1.00 | | 1.00 | | | | |
| v/c Ratio | 0.22 | | 0.14 | | | | |
| Control Delay | 0.3 | | 0.0 | | | | |
| Queue Delay | 0.0 | | 0.0 | | | | |
| Total Delay | 0.3 | | 0.0 | | | | |



| Lane Group | NBU | NBL | NBT | SBT | SBR | SEL | SER |
|----------------|-----|-----|-----|-----|-----|-----|-----|
| LOS | A | | A | | | | |
| Approach Delay | | | 0.1 | | | | |
| Approach LOS | | | A | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 22 |
| Actuated Cycle Length: | 22 |
| Offset: | 0 (0%), Referenced to phase 2:NBTU and 6:, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.22 |
| Intersection Signal Delay: | 0.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 62.2% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 124: US 59 NBFR



| Lane Group | ø2 | ø15 |
|----------------------------|----|-----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |

Year 2020 No-Build
125: Chestnut Ridge Dr. & Kingwood Dr.

AM Peak Hour

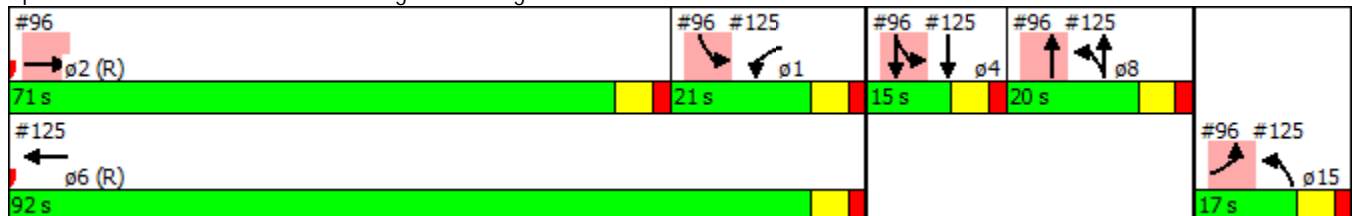


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-----|-------|-----|-----|-------|-----|
| Detector Phase | | | | 1 | 6 | | 15 | 8 | | | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 5.0 | 4.0 | | | 5.0 | | | 5.0 | |
| Minimum Split (s) | | | | 11.0 | 10.0 | | | 19.0 | | | 11.0 | |
| Total Split (s) | | | | 21.0 | 92.0 | | | 20.0 | | | 15.0 | |
| Total Split (%) | | | | 14.6% | 63.9% | | | 13.9% | | | 10.4% | |
| Maximum Green (s) | | | | 15.0 | 86.0 | | | 14.0 | | | 9.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 2.0 | 2.0 | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | Lag | | | | Lag | | | Lead | |
| Lead-Lag Optimize? | | | | Yes | | | | Yes | | | Yes | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | C-Max | | | None | | | None | |
| Walk Time (s) | | | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | 0 | | | | |
| Act Effct Green (s) | | | | 15.0 | 86.1 | | | 31.2 | | | 8.7 | |
| Actuated g/C Ratio | | | | 0.10 | 0.60 | | | 0.22 | | | 0.06 | |
| v/c Ratio | | | | 0.62 | 1.06 | | | 0.24 | | | 0.88 | |
| Control Delay | | | | 58.9 | 50.0 | | | 10.4 | | | 70.5 | |
| Queue Delay | | | | 0.0 | 0.0 | | | 0.0 | | | 2.1 | |
| Total Delay | | | | 58.9 | 50.0 | | | 10.4 | | | 72.6 | |
| LOS | | | | E | D | | | B | | | E | |
| Approach Delay | | | | | 50.4 | | | 10.4 | | | 72.6 | |
| Approach LOS | | | | | D | | | B | | | E | |

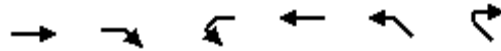
Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 20 (14%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 50.4 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 85.8% |
| ICU Level of Service: | E |
| Analysis Period (min): | 15 |

Splits and Phases: 125: Chestnut Ridge Dr. & Kingwood Dr.



| Lane Group | ø2 | ø15 |
|-------------------------|-------|------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 4.0 | 5.0 |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 71.0 | 17.0 |
| Total Split (%) | 49% | 12% |
| Maximum Green (s) | 65.0 | 11.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | C-Max | None |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | ↑↑ | | |
| Volume (vph) | 832 | 0 | 0 | 1842 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3539 | 0 | 0 | 3539 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3539 | 0 | 0 | 3539 | 0 | 0 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 1032 | | | 502 | 532 | |
| Travel Time (s) | 17.6 | | | 8.6 | 9.1 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 1022 | 0 | 0 | 2262 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1022 | 0 | 0 | 2262 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 0 | | | 0 | 12 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 60.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Year 2020 No-Build
128: Green Oak Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 72 | 1718 | 413 | 79 | 75 | 0 | 0 | 112 | 42 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 150 | | 150 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 1 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | 0.850 | | | | | | 0.959 |
| Flt Protected | | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1770 | 3539 | 1583 | 1770 | 1863 | 0 | 0 | 3394 | 0 |
| Flt Permitted | | | | 0.950 | | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1770 | 3539 | 1583 | 1770 | 1863 | 0 | 0 | 3394 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 226 | | | | | | 28 |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | | 30 |
| Link Distance (ft) | | 558 | | | 1500 | | | 89 | | | | 282 |
| Travel Time (s) | | 9.5 | | | 25.6 | | | 2.0 | | | | 6.4 |
| 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 |
| Growth Factor | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% | 117% |
| Adj. Flow (vph) | 0 | 0 | 0 | 92 | 2185 | 525 | 100 | 95 | 0 | 0 | 142 | 53 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 92 | 2185 | 525 | 100 | 95 | 0 | 0 | 195 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | | | 1 | 2 | 1 | 1 | 2 | | | | 2 |
| Detector Template | | | | Left | Thru | Right | Left | Thru | | | | Thru |
| Leading Detector (ft) | | | | 20 | 100 | 20 | 20 | 100 | | | | 100 |
| Trailing Detector (ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Position(ft) | | | | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Detector 1 Size(ft) | | | | 20 | 6 | 20 | 20 | 6 | | | | 6 |
| Detector 1 Type | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 |
| Detector 2 Position(ft) | | | | | 94 | | | 94 | | | | 94 |
| Detector 2 Size(ft) | | | | | 6 | | | 6 | | | | 6 |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | Cl+Ex |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | 0.0 |
| Turn Type | | | | Prot | NA | Perm | Prot | NA | | | | NA |
| Protected Phases | | | | 1 | 6 | | 15 | 8 | | | | 4 |
| Permitted Phases | | | | | | | 6 | | | | | |

| Lane Group | ø2 | ø15 |
|----------------------------|----|-----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |

Year 2020 No-Build
128: Green Oak Dr. & Kingwood Dr.

AM Peak Hour

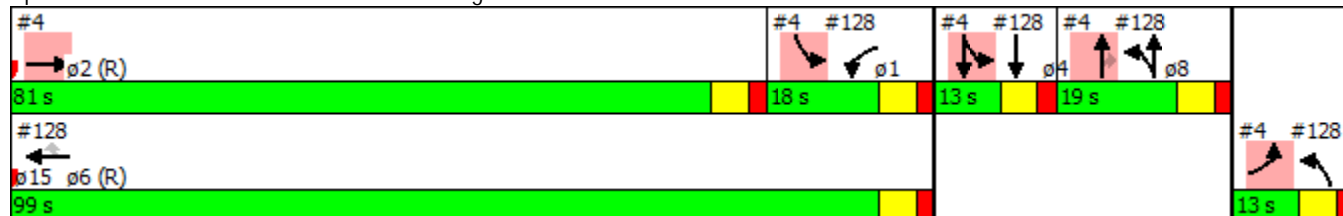


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-------|------|-------|-----|-----|-----|-------|
| Detector Phase | | | | 1 | 6 | 6 | 15 | 8 | | | | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 5.0 | 4.0 | 4.0 | | 5.0 | | | | 5.0 |
| Minimum Split (s) | | | | 11.0 | 10.0 | 10.0 | | 19.0 | | | | 11.0 |
| Total Split (s) | | | | 18.0 | 99.0 | 99.0 | | 19.0 | | | | 13.0 |
| Total Split (%) | | | | 12.5% | 68.8% | 68.8% | | 13.2% | | | | 9.0% |
| Maximum Green (s) | | | | 12.0 | 93.0 | 93.0 | | 13.0 | | | | 7.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | | | | 4.0 |
| All-Red Time (s) | | | | 2.0 | 2.0 | 2.0 | | 2.0 | | | | 2.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | 0.0 | | 0.0 | | | | 0.0 |
| Total Lost Time (s) | | | | 6.0 | 6.0 | 6.0 | | 6.0 | | | | 6.0 |
| Lead/Lag | | | | Lag | | | | Lag | | | | Lead |
| Lead-Lag Optimize? | | | | Yes | | | | Yes | | | | Yes |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | | 3.0 | | | | 3.0 |
| Recall Mode | | | | None | C-Max | C-Max | | None | | | | None |
| Walk Time (s) | | | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | 0 | | | | |
| Act Effct Green (s) | | | | 12.0 | 93.6 | 93.6 | 25.4 | 12.5 | | | | 7.0 |
| Actuated g/C Ratio | | | | 0.08 | 0.65 | 0.65 | 0.18 | 0.09 | | | | 0.05 |
| v/c Ratio | | | | 0.63 | 0.95 | 0.47 | 0.32 | 0.59 | | | | 1.02 |
| Control Delay | | | | 82.8 | 33.8 | 8.3 | 8.8 | 54.9 | | | | 126.7 |
| Queue Delay | | | | 37.2 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 18.2 |
| Total Delay | | | | 120.1 | 33.8 | 8.3 | 8.8 | 54.9 | | | | 144.9 |
| LOS | | | | F | C | A | A | D | | | | F |
| Approach Delay | | | | | 31.8 | | | 31.3 | | | | 144.9 |
| Approach LOS | | | | | C | | | C | | | | F |

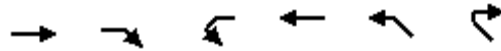
Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 120 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.02 |
| Intersection Signal Delay: | 38.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 106.7% |
| ICU Level of Service: | G |
| Analysis Period (min): | 15 |

Splits and Phases: 128: Green Oak Dr. & Kingwood Dr.



| Lane Group | ø2 | ø15 |
|-----------------------------|-------|------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 4.0 | 5.0 |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 81.0 | 13.0 |
| Total Split (%) | 56% | 9% |
| Maximum Green (s) | 75.0 | 7.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | C-Max | None |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑↑ | | ↑↑ | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3278 | 0 | 3539 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3278 | 0 | 3539 | 0 | 0 |
| Link Speed (mph) | 40 | | | 30 | 40 | |
| Link Distance (ft) | 355 | | | 392 | 393 | |
| Travel Time (s) | 6.1 | | | 8.9 | 6.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 40 | | | 40 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 15 | 15 | | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|-----------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 6.7% ICU Level of Service A |
| Analysis Period (min) | 15 |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|------|-------|
| Lane Configurations | | ↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 0 | 0 | 0 | 0 |
| Link Speed (mph) | | 40 | 40 | | 30 | |
| Link Distance (ft) | | 393 | 799 | | 60 | |
| Travel Time (s) | | 6.7 | 13.6 | | 1.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 0 | 0 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 6.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | NBL | NBR | NET | NER | SWL | SWT |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations | | ↑↑ | | | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3278 | 0 | 0 | 0 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3278 | 0 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 30 | | | 40 |
| Link Distance (ft) | 902 | | 887 | | | 1898 |
| Travel Time (s) | 15.4 | | 20.2 | | | 32.4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 0 | | | 0 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Free | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| Lane Group | ø2 | ø15 |
|----------------------------|----|-----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |

Year 2020 No-Build
 136: Lake Kingwood Trail & Kingwood Dr.

AM Peak Hour

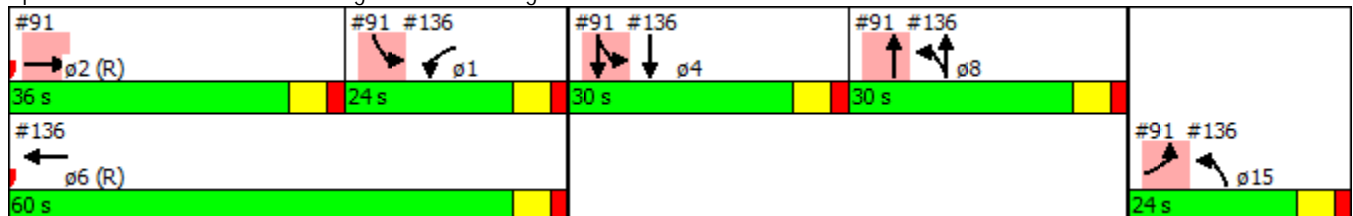


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|-----|-------|-------|-----|-----|-------|-----|-----|-------|-----|
| Detector Phase | | | | 1 | 6 | | 15 | 8 | | | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | 5.0 | 4.0 | | | 5.0 | | | 5.0 | |
| Minimum Split (s) | | | | 11.0 | 10.0 | | | 19.0 | | | 11.0 | |
| Total Split (s) | | | | 24.0 | 60.0 | | | 30.0 | | | 30.0 | |
| Total Split (%) | | | | 16.7% | 41.7% | | | 20.8% | | | 20.8% | |
| Maximum Green (s) | | | | 18.0 | 54.0 | | | 24.0 | | | 24.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| All-Red Time (s) | | | | 2.0 | 2.0 | | | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | Lag | | | | Lag | | | Lead | |
| Lead-Lag Optimize? | | | | Yes | | | | Yes | | | Yes | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Recall Mode | | | | None | C-Max | | | None | | | None | |
| Walk Time (s) | | | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | 0 | | | | |
| Act Effct Green (s) | | | | 18.0 | 102.5 | | | 13.5 | | | 10.0 | |
| Actuated g/C Ratio | | | | 0.12 | 0.71 | | | 0.09 | | | 0.07 | |
| v/c Ratio | | | | 0.42 | 0.74 | | | 0.18 | | | 0.47 | |
| Control Delay | | | | 64.5 | 16.9 | | | 26.1 | | | 67.6 | |
| Queue Delay | | | | 0.0 | 0.0 | | | 0.2 | | | 0.0 | |
| Total Delay | | | | 64.5 | 16.9 | | | 26.2 | | | 67.6 | |
| LOS | | | | E | B | | | C | | | E | |
| Approach Delay | | | | | 19.2 | | | 26.3 | | | 67.6 | |
| Approach LOS | | | | | B | | | C | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 22.0
 Intersection LOS: C
 Intersection Capacity Utilization 66.4%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 136: Lake Kingwood Trail & Kingwood Dr.



| Lane Group | ø2 | ø15 |
|-----------------------------|-------|------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 4.0 | 5.0 |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 36.0 | 24.0 |
| Total Split (%) | 25% | 17% |
| Maximum Green (s) | 30.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | C-Max | None |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
139: Kingwood Dr. & Kingwood High School

AM Peak Hour



| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------------------|------|------|-------|------|-------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑ | | | | | | ↑↑ | ↑ |
| Volume (vph) | 0 | 94 | 33 | 1 | 73 | 0 | 0 | 0 | 0 | 0 | 1525 | 354 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 150 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | | | | | | | 0.850 |
| Fl _t Protected | | | | | 0.999 | | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 1583 | 0 | 1861 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Fl _t Permitted | | | | | 0.999 | | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 1583 | 0 | 1861 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 113 | | | | | | | | | 222 |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | 30 | |
| Link Distance (ft) | | 317 | | | 110 | | | 202 | | | 887 | |
| Travel Time (s) | | 7.2 | | | 2.5 | | | 3.4 | | | 20.2 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 115 | 41 | 1 | 90 | 0 | 0 | 0 | 0 | 0 | 1873 | 435 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 115 | 41 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 1873 | 435 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | | NA | Perm | Prot | NA | | | | | | NA | Perm |
| Protected Phases | | 4 | | 15 | 8 | | | | | | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | 6 |
| Minimum Split (s) | | 11.0 | 11.0 | | 11.0 | | | | | | 10.0 | 10.0 |
| Total Split (s) | | 13.0 | 13.0 | | 11.0 | | | | | | 101.0 | 101.0 |
| Total Split (%) | | 9.0% | 9.0% | | 7.6% | | | | | | 69.7% | 69.7% |
| Maximum Green (s) | | 7.0 | 7.0 | | 5.0 | | | | | | 95.0 | 95.0 |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | | | | | 4.0 | 4.0 |
| All-Red Time (s) | | 2.0 | 2.0 | | 2.0 | | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | | | | 0.0 | 0.0 |
| Total Lost Time (s) | | 6.0 | 6.0 | | 6.0 | | | | | | 6.0 | 6.0 |
| Lead/Lag | | Lead | Lead | | Lag | | | | | | | |
| Lead-Lag Optimize? | | Yes | Yes | | Yes | | | | | | | |
| Act Effect Green (s) | | 7.0 | 7.0 | | 25.0 | | | | | | 95.0 | 95.0 |
| Actuated g/C Ratio | | 0.05 | 0.05 | | 0.17 | | | | | | 0.66 | 0.66 |
| v/c Ratio | | 0.68 | 0.22 | | 0.28 | | | | | | 0.81 | 0.39 |
| Control Delay | | 87.5 | 2.8 | | 6.8 | | | | | | 21.9 | 6.2 |
| Queue Delay | | 0.6 | 0.0 | | 3.4 | | | | | | 0.0 | 0.0 |
| Total Delay | | 88.1 | 2.8 | | 10.1 | | | | | | 21.9 | 6.2 |

| Lane Group | ø2 | ø15 |
|----------------------------|-------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |
| Minimum Split (s) | 10.0 | 10.0 |
| Total Split (s) | 101.0 | 20.0 |
| Total Split (%) | 70% | 14% |
| Maximum Green (s) | 95.0 | 14.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |

Year 2020 No-Build
 139: Kingwood Dr. & Kingwood High School

AM Peak Hour



| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|------|-----|
| LOS | | F | A | | B | | | | | | C | A |
| Approach Delay | | 65.7 | | | 10.1 | | | | | | 19.0 | |
| Approach LOS | | E | | | B | | | | | | B | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 145 |
| Actuated Cycle Length: | 145 |
| Offset: | 0 (0%), Referenced to phase 2:NET and 6:, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 21.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 71.2% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 139: Kingwood Dr. & Kingwood High School

| | | |
|------------------|----------------------------|---------------------|
| #88 ↗ ϕ2 (R) | #88 #139 #139 ↗ ϕ4 ↘ ϕ8 | |
| 101 s | 13 s | 11 s |
| #139 ↘ ϕ6 (R) | | #88 #139 ↗ ϕ15 ↘ |
| 101 s | | 20 s |

| Lane Group | ø2 | ø15 |
|----------------------|----|-----|
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
141: Lake Houston Parkway & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 154 | 298 | 331 | 154 | 791 | 135 | 450 | 642 | 60 | 169 | 807 | 265 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 150 | 150 | | 150 | 150 | | 150 | 150 | | 150 |
| Storage Lanes | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Fr _t | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Fl _t Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 313 | | | 159 | | | 114 | | | 159 |
| Link Speed (mph) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (ft) | | 513 | | | 546 | | | 450 | | | 568 | |
| Travel Time (s) | | 8.7 | | | 9.3 | | | 7.7 | | | 9.7 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 189 | 366 | 407 | 189 | 972 | 166 | 553 | 789 | 74 | 208 | 991 | 325 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 189 | 366 | 407 | 189 | 972 | 166 | 553 | 789 | 74 | 208 | 991 | 325 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 24 | | | 24 | | | 24 | | | 24 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Minimum Split (s) | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 | 10.0 | 22.0 | 22.0 |
| Total Split (s) | 16.0 | 45.0 | 45.0 | 18.0 | 47.0 | 47.0 | 32.0 | 62.0 | 62.0 | 19.0 | 49.0 | 49.0 |
| Total Split (%) | 11.1% | 31.3% | 31.3% | 12.5% | 32.6% | 32.6% | 22.2% | 43.1% | 43.1% | 13.2% | 34.0% | 34.0% |
| Maximum Green (s) | 10.0 | 39.0 | 39.0 | 12.0 | 41.0 | 41.0 | 26.0 | 56.0 | 56.0 | 13.0 | 43.0 | 43.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (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 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 10.0 | 39.0 | 39.0 | 12.0 | 41.0 | 41.0 | 26.0 | 56.0 | 56.0 | 13.0 | 43.0 | 43.0 |
| Actuated g/C Ratio | 0.07 | 0.27 | 0.27 | 0.08 | 0.28 | 0.28 | 0.18 | 0.39 | 0.39 | 0.09 | 0.30 | 0.30 |
| v/c Ratio | 0.79 | 0.38 | 0.62 | 0.66 | 0.97 | 0.29 | 0.89 | 0.57 | 0.11 | 0.67 | 0.94 | 0.56 |

Year 2020 No-Build
 141: Lake Houston Parkway & Kingwood Dr.

AM Peak Hour

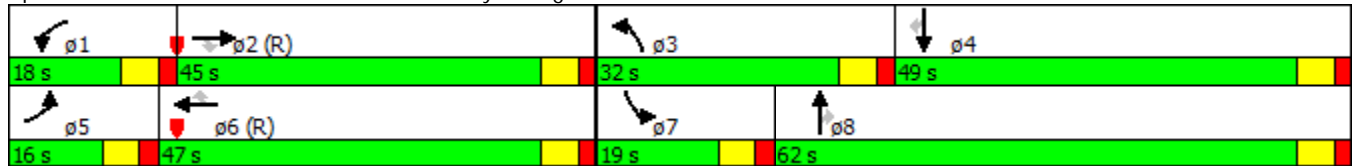


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|------|------|------|------|------|-----|------|------|-----|------|------|------|
| Control Delay | 89.1 | 44.1 | 15.3 | 76.8 | 63.6 | 7.5 | 75.4 | 36.6 | 1.4 | 75.0 | 65.5 | 25.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 89.1 | 44.1 | 15.3 | 76.8 | 63.6 | 7.5 | 75.4 | 36.6 | 1.4 | 75.0 | 65.5 | 25.0 |
| LOS | F | D | B | E | E | A | E | D | A | E | E | C |
| Approach Delay | 40.8 | | | 58.5 | | | 49.9 | | | 58.2 | | |
| Approach LOS | D | | | E | | | D | | | E | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 67 (47%), Referenced to phase 2:EBT and 6:WBT, Start of Green |
| Natural Cycle: | 100 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.97 |
| Intersection Signal Delay: | 52.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 89.4% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Splits and Phases: 141: Lake Houston Parkway & Kingwood Dr.



Year 2020 No-Build
144: Forest Garden Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 124 | 437 | 44 | 10 | 1006 | 80 | 107 | 44 | 16 | 78 | 30 | 239 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 150 | | 0 | 150 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.986 | | | 0.989 | | | 0.985 | | | 0.897 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.969 | | | 0.989 | |
| Satd. Flow (prot) | 1770 | 3490 | 0 | 1770 | 3500 | 0 | 0 | 3378 | 0 | 0 | 3140 | 0 |
| Flt Permitted | 0.150 | | | 0.429 | | | | 0.617 | | | 0.824 | |
| Satd. Flow (perm) | 279 | 3490 | 0 | 799 | 3500 | 0 | 0 | 2151 | 0 | 0 | 2616 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 27 | | | 21 | | | 15 | | | 74 | |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | 30 | |
| Link Distance (ft) | | 821 | | | 549 | | | 426 | | | 481 | |
| Travel Time (s) | | 14.0 | | | 9.4 | | | 9.7 | | | 10.9 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 152 | 537 | 54 | 12 | 1236 | 98 | 131 | 54 | 20 | 96 | 37 | 294 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 152 | 591 | 0 | 12 | 1334 | 0 | 0 | 205 | 0 | 0 | 427 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | |
| Total Split (s) | 50.0 | 50.0 | | 50.0 | 50.0 | | 22.0 | 22.0 | | 22.0 | 22.0 | |
| Total Split (%) | 69.4% | 69.4% | | 69.4% | 69.4% | | 30.6% | 30.6% | | 30.6% | 30.6% | |
| Maximum Green (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effect Green (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | | 16.0 | | | 16.0 | |
| Actuated g/C Ratio | 0.61 | 0.61 | | 0.61 | 0.61 | | | 0.22 | | | 0.22 | |
| v/c Ratio | 0.89 | 0.28 | | 0.02 | 0.62 | | | 0.42 | | | 0.67 | |

Year 2020 No-Build
 144: Forest Garden Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|------|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Control Delay | 84.6 | 8.8 | | 5.7 | 10.2 | | | 25.3 | | | 26.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | 84.6 | 8.8 | | 5.7 | 10.2 | | | 25.3 | | | 26.9 | |
| LOS | F | A | | A | B | | | C | | | C | |
| Approach Delay | | 24.3 | | | 10.2 | | | 25.3 | | | 26.9 | |
| Approach LOS | | C | | | B | | | C | | | C | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 22 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.89 |
| Intersection Signal Delay: | 17.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 81.0% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 144: Forest Garden Dr. & Kingwood Dr.



Year 2020 No-Build
146: Northpark Dr. & Woodridge Pkwy

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | ↑ | ↑ |
| Volume (vph) | 0 | 0 | 0 | 82 | 1875 | 49 | 122 | 40 | 0 | 0 | 10 | 10 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.996 | | | | | | | 0.850 |
| Flt Protected | | | | | 0.998 | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3518 | 0 | 1770 | 1863 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | | | | | 0.998 | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3518 | 0 | 1770 | 1863 | 0 | 0 | 1863 | 1583 |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 2961 | | | 325 | | | 125 | | | 384 | |
| Travel Time (s) | | 44.9 | | | 4.9 | | | 2.8 | | | 8.7 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 101 | 2303 | 60 | 150 | 49 | 0 | 0 | 12 | 12 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2464 | 0 | 150 | 49 | 0 | 0 | 12 | 12 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 112.9% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Year 2020 No-Build
147: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 11 | 994 | 11 | 36 | 38 | 0 | 0 | 16 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 150 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.998 | | | | | | 0.875 | |
| Flt Protected | | | | 0.950 | | | | 0.976 | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1770 | 3532 | 0 | 0 | 3454 | 0 | 0 | 3097 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.976 | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1770 | 3532 | 0 | 0 | 3454 | 0 | 0 | 3097 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | 1 | | | | | | | 99 |
| Link Speed (mph) | | 40 | | | 40 | | | 30 | | | | 30 |
| Link Distance (ft) | | 839 | | | 1628 | | | 83 | | | | 459 |
| Travel Time (s) | | 14.3 | | | 27.8 | | | 1.9 | | | | 10.4 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 14 | 1221 | 14 | 44 | 47 | 0 | 0 | 20 | 99 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 14 | 1235 | 0 | 0 | 91 | 0 | 0 | 119 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | | 0 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | | | | Prot | NA | | Prot | NA | | | | NA |
| Protected Phases | | | | 1 | 6 | | 15 | 8 | | | | 4 |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | | | 11.0 | 10.0 | | | 19.0 | | | | 11.0 |
| Total Split (s) | | | | 13.0 | 91.0 | | | 20.0 | | | | 16.0 |
| Total Split (%) | | | | 9.0% | 63.2% | | | 13.9% | | | | 11.1% |
| Maximum Green (s) | | | | 7.0 | 85.0 | | | 14.0 | | | | 10.0 |
| Yellow Time (s) | | | | 4.0 | 4.0 | | | 4.0 | | | | 4.0 |
| All-Red Time (s) | | | | 2.0 | 2.0 | | | 2.0 | | | | 2.0 |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | | | | 0.0 |
| Total Lost Time (s) | | | | 6.0 | 6.0 | | | 6.0 | | | | 6.0 |
| Lead/Lag | | | | Lag | | | | Lag | | | | Lead |
| Lead-Lag Optimize? | | | | Yes | | | | Yes | | | | Yes |
| Walk Time (s) | | | | | | | | 6.0 | | | | |
| Flash Dont Walk (s) | | | | | | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | 0 | | | | |
| Act Effect Green (s) | | | | 7.0 | 85.0 | | | 31.0 | | | | 10.0 |
| Actuated g/C Ratio | | | | 0.05 | 0.59 | | | 0.22 | | | | 0.07 |
| v/c Ratio | | | | 0.16 | 0.59 | | | 0.12 | | | | 0.39 |

| Lane Group | ø2 | ø15 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 78.0 | 17.0 |
| Total Split (%) | 54% | 12% |
| Maximum Green (s) | 72.0 | 11.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
 147: Timber Shade Dr. & Kingwood Dr.

AM Peak Hour

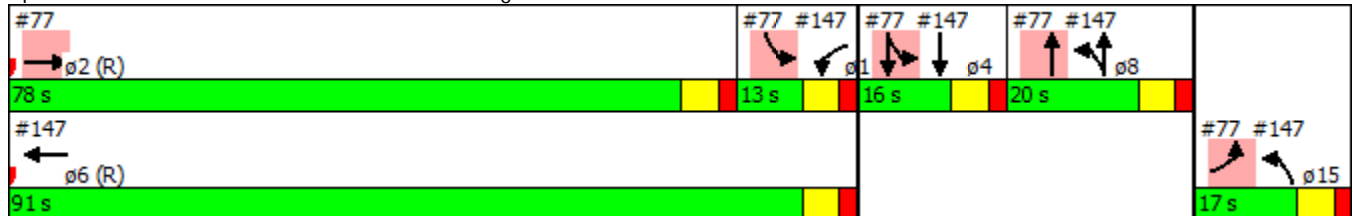


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|------|-----|
| Control Delay | | | | 51.5 | 9.7 | | | 4.7 | | | 20.7 | |
| Queue Delay | | | | 0.0 | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | | | 51.5 | 9.7 | | | 4.7 | | | 20.7 | |
| LOS | | | | D | A | | | A | | | C | |
| Approach Delay | | | | | 10.2 | | | 4.7 | | | 20.7 | |
| Approach LOS | | | | | B | | | A | | | C | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 12 (8%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.59 |
| Intersection Signal Delay: | 10.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 50.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

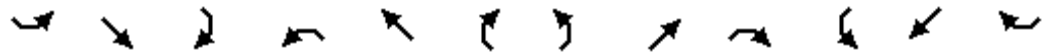
Splits and Phases: 147: Timber Shade Dr. & Kingwood Dr.



| Lane Group | ø2 | ø15 |
|----------------------|----|-----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
149: Kingwood Dr. & Willow Terrace

AM Peak Hour



| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | ↖ | ↗ | | | | | ↖ | ↑↑ | |
| Volume (vph) | 0 | 23 | 52 | 424 | 40 | 0 | 0 | 0 | 0 | 32 | 574 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.896 | | | | | | | | | | 0.996 |
| Flt Protected | | | | 0.950 | 0.960 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3171 | 0 | 1681 | 1699 | 0 | 0 | 0 | 0 | 1770 | 3525 | 0 |
| Flt Permitted | | | | 0.950 | 0.960 | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3171 | 0 | 1681 | 1699 | 0 | 0 | 0 | 0 | 1770 | 3525 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 64 | | | | | | | | | | 2 |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | | 40 |
| Link Distance (ft) | | 359 | | | 105 | | | 1388 | | | | 466 |
| Travel Time (s) | | 8.2 | | | 2.4 | | | 23.7 | | | | 7.9 |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 28 | 64 | 521 | 49 | 0 | 0 | 0 | 0 | 39 | 705 | 21 |
| Shared Lane Traffic (%) | | | | 46% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 92 | 0 | 281 | 289 | 0 | 0 | 0 | 0 | 39 | 726 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | | NA | | Prot | NA | | | | | Prot | NA | |
| Protected Phases | | 4 | | 15 8 | 8 | | | | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 11.0 | | | 19.0 | | | | | 11.0 | 10.0 | |
| Total Split (s) | | 14.0 | | | 42.0 | | | | | 15.0 | 63.0 | |
| Total Split (%) | | 9.7% | | | 29.2% | | | | | 10.4% | 43.8% | |
| Maximum Green (s) | | 8.0 | | | 36.0 | | | | | 9.0 | 57.0 | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | | | 6.0 | 6.0 | |
| Lead/Lag | | Lead | | | Lag | | | | | Lag | | |
| Lead-Lag Optimize? | | Yes | | | Yes | | | | | Yes | | |
| Walk Time (s) | | | | | 6.0 | | | | | | | |
| Flash Dont Walk (s) | | | | | 7.0 | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | | | | | | |
| Act Effect Green (s) | | 8.0 | | 61.0 | 61.0 | | | | | 9.0 | 57.0 | |
| Actuated g/C Ratio | | 0.06 | | 0.42 | 0.42 | | | | | 0.06 | 0.40 | |
| v/c Ratio | | 0.39 | | 0.39 | 0.40 | | | | | 0.35 | 0.52 | |

| Lane Group | ø2 | ø15 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 48.0 | 25.0 |
| Total Split (%) | 33% | 17% |
| Maximum Green (s) | 42.0 | 19.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
 149: Kingwood Dr. & Willow Terrace

AM Peak Hour

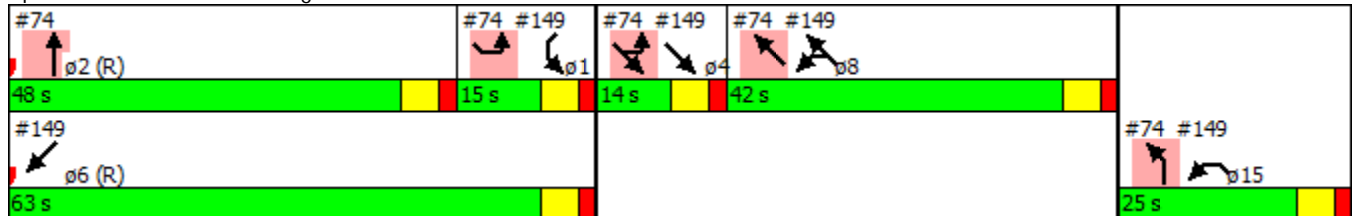


| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------|-----|------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| Control Delay | | 29.5 | | 1.7 | 1.8 | | | | | 79.2 | 39.1 | |
| Queue Delay | | 0.0 | | 1.5 | 1.5 | | | | | 0.0 | 0.0 | |
| Total Delay | | 29.5 | | 3.2 | 3.2 | | | | | 79.2 | 39.1 | |
| LOS | | C | | A | A | | | | | E | D | |
| Approach Delay | | 29.5 | | | 3.2 | | | | | | 41.1 | |
| Approach LOS | | C | | | A | | | | | | D | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 12 (8%), Referenced to phase 2:NBT and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 25.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 49.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 149: Kingwood Dr. & Willow Terrace



| Lane Group | ø2 | ø15 |
|----------------------|----|-----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

| Lane Group | ø2 | ø15 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 67.0 | 16.0 |
| Total Split (%) | 47% | 11% |
| Maximum Green (s) | 61.0 | 10.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effect Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |

Year 2020 No-Build
 151: Kingwood Dr. & High Valley

AM Peak Hour

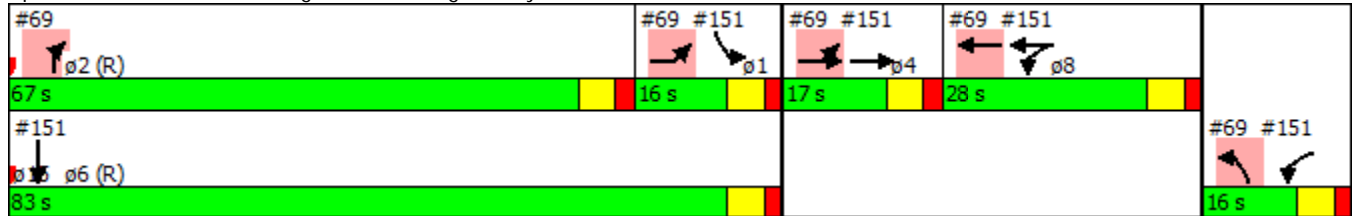


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| LOS | | D | | A | A | | | | | | | C |
| Approach Delay | | 47.2 | | | 7.5 | | | | | | | 26.0 |
| Approach LOS | | D | | | A | | | | | | | C |

Intersection Summary

| | |
|--|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 90 (63%), Referenced to phase 2:NBR and 6:, Start of Green |
| Natural Cycle: | 75 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | Err |
| Intersection Signal Delay: | 24.7 |
| Intersection LOS: | C |
| Intersection Capacity Utilization Err% | |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 151: Kingwood Dr. & High Valley



| Lane Group | ø2 | ø15 |
|----------------------|----|-----|
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |



| Lane Group | NBU | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|----------|----------|-------|------|------|------|-------|
| Lane Configurations | A | B | | | | | |
| Volume (vph) | 233 | 705 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | | |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 1770 | 8494 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 1770 | 8494 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (mph) | | 55 | | | 30 | 55 | |
| Link Distance (ft) | | 6172 | | | 362 | 365 | |
| Travel Time (s) | | 76.5 | | | 8.2 | 4.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 286 | 866 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 286 | 866 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No |
| Lane Alignment | R NA | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | 0 | |
| Link Offset(ft) | | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 9 | 15 | | 15 | 9 |
| Sign Control | | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
 159: Russel Palmer & Northpark Dr.

AM Peak Hour



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR | ø2 | ø4 |
|----------------------------|------|-------|--------|-------|-------|-------|----|----|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 0 | 0 | 77 | 1865 | 126 | 0 | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | |
| Storage Length (ft) | | 0 | 150 | | 0 | 0 | | |
| Storage Lanes | | 0 | 1 | | 1 | 0 | | |
| Taper Length (ft) | | | 25 | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | | |
| Fr _t | | | | | | | | |
| Fl _t Protected | | | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 1770 | 3539 | 1770 | 0 | | |
| Fl _t Permitted | | | 0.950 | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 1770 | 3539 | 1770 | 0 | | |
| Right Turn on Red | | Yes | | | | Yes | | |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (mph) | 45 | | | 45 | 30 | | | |
| Link Distance (ft) | 128 | | | 2961 | 106 | | | |
| Travel Time (s) | 1.9 | | | 44.9 | 2.4 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | | |
| Adj. Flow (vph) | 0 | 0 | 95 | 2291 | 155 | 0 | | |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 95 | 2291 | 155 | 0 | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | | |
| Median Width(ft) | 12 | | | 12 | 12 | | | |
| Link Offset(ft) | 0 | | | 0 | 0 | | | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | | | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 | | |
| Number of Detectors | | | 1 | 2 | 1 | | | |
| Detector Template | | | Left | Thru | Left | | | |
| Leading Detector (ft) | | | 20 | 100 | 20 | | | |
| Trailing Detector (ft) | | | 0 | 0 | 0 | | | |
| Detector 1 Position(ft) | | | 0 | 0 | 0 | | | |
| Detector 1 Size(ft) | | | 20 | 6 | 20 | | | |
| Detector 1 Type | | | Cl+Ex | Cl+Ex | Cl+Ex | | | |
| Detector 1 Channel | | | | | | | | |
| Detector 1 Extend (s) | | | 0.0 | 0.0 | 0.0 | | | |
| Detector 1 Queue (s) | | | 0.0 | 0.0 | 0.0 | | | |
| Detector 1 Delay (s) | | | 0.0 | 0.0 | 0.0 | | | |
| Detector 2 Position(ft) | | | | 94 | | | | |
| Detector 2 Size(ft) | | | | 6 | | | | |
| Detector 2 Type | | | | Cl+Ex | | | | |
| Detector 2 Channel | | | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | | | | |
| Turn Type | | | custom | NA | NA | | | |
| Protected Phases | | | | 6 | 8 | | 2 | 4 |
| Permitted Phases | | | 1 | | | | | |

Year 2020 No-Build
 159: Russel Palmer & Northpark Dr.

AM Peak Hour



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR | ø2 | ø4 |
|-----------------------|-----|-----|-------|-------|-------|-----|-------|------|
| Detector Phase | | | 1 | 6 | 8 | | | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | | | 5.0 | 15.0 | 5.0 | | 15.0 | 5.0 |
| Minimum Split (s) | | | 11.3 | 21.3 | 11.6 | | 21.3 | 11.3 |
| Total Split (s) | | | 21.0 | 116.0 | 28.0 | | 95.0 | 28.0 |
| Total Split (%) | | | 14.6% | 80.6% | 19.4% | | 66% | 19% |
| Maximum Green (s) | | | 15.0 | 110.0 | 22.0 | | 89.0 | 22.0 |
| Yellow Time (s) | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| All-Red Time (s) | | | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | 0.0 | 0.0 | 0.0 | | | |
| Total Lost Time (s) | | | 6.0 | 6.0 | 6.0 | | | |
| Lead/Lag | | | Lead | | | | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | |
| Vehicle Extension (s) | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | | | None | C-Max | Max | | C-Max | None |
| Act Effect Green (s) | | | 12.4 | 110.0 | 22.0 | | | |
| Actuated g/C Ratio | | | 0.09 | 0.76 | 0.15 | | | |
| v/c Ratio | | | 0.62 | 0.85 | 0.57 | | | |
| Control Delay | | | 80.9 | 15.4 | 9.7 | | | |
| Queue Delay | | | 125.2 | 0.0 | 0.2 | | | |
| Total Delay | | | 206.1 | 15.4 | 9.9 | | | |
| LOS | | | F | B | A | | | |
| Approach Delay | | | | 23.0 | 9.9 | | | |
| Approach LOS | | | | C | A | | | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 0 (0%), Referenced to phase 2:EBT and 6:, Start of Green |
| Natural Cycle: | 70 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.85 |
| Intersection Signal Delay: | 22.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 76.1% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 159: Russel Palmer & Northpark Dr.

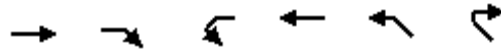
| | | |
|-------------------------|-----------------------|------------------------|
| #159 ø1 21 s | #35 ø2 (R) 95 s | #35 ø4 28 s |
| #159 ø6 (R) 116 s | | #35 #159 ø8 28 s |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↕↕ | | | | |
| Volume (vph) | 41 | 986 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 3532 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 3532 | 0 | 0 | 0 | 0 |
| Link Speed (mph) | | 45 | 45 | | 30 | |
| Link Distance (ft) | | 2834 | 117 | | 111 | |
| Travel Time (s) | | 42.9 | 1.8 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 50 | 1211 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1261 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 0 | 0 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

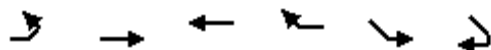
| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 97.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service F |



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | ↑↑ | ↑ | |
| Volume (vph) | 0 | 0 | 0 | 1891 | 41 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3539 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3539 | 1770 | 0 |
| Link Speed (mph) | 45 | | | 45 | 30 | |
| Link Distance (ft) | 2834 | | | 128 | 111 | |
| Travel Time (s) | 42.9 | | | 1.9 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2323 | 50 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2323 | 50 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 0 | | | 0 | 12 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Sign Control | Free | | | Free | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 69.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service C |



| Lane Group | EBL | EBT | WBT | WBR | SEL | SER |
|----------------------------|------|------|------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 764 | 1940 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 3539 | 0 | 0 | 0 |
| Link Speed (mph) | | 45 | 45 | | 30 | |
| Link Distance (ft) | | 1422 | 944 | | 1100 | |
| Travel Time (s) | | 21.5 | 14.3 | | 25.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 938 | 2383 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 938 | 2383 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 12 | 12 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |



| Lane Group | WBL | WBR | NET | NER | SWL | SWT |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations | | | ↑↑ | | | ↑↑ |
| Volume (vph) | 0 | 0 | 360 | 0 | 0 | 561 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3539 | 0 | 0 | 3539 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3539 | 0 | 0 | 3539 |
| Link Speed (mph) | 40 | | 40 | | | 40 |
| Link Distance (ft) | 609 | | 2651 | | | 576 |
| Travel Time (s) | 10.4 | | 45.2 | | | 9.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 442 | 0 | 0 | 689 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 442 | 0 | 0 | 689 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Free | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 20.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| Lane Group | ø1 | ø6 |
|----------------------------|----|----|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphp) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Detector 1 Position(ft) | | |
| Detector 1 Size(ft) | | |
| Detector 1 Type | | |
| Detector 1 Channel | | |
| Detector 1 Extend (s) | | |
| Detector 1 Queue (s) | | |
| Detector 1 Delay (s) | | |
| Detector 2 Position(ft) | | |
| Detector 2 Size(ft) | | |
| Detector 2 Type | | |
| Detector 2 Channel | | |
| Detector 2 Extend (s) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |

Year 2020 No-Build
165: Northpark Dr. & Rock Springs

AM Peak Hour

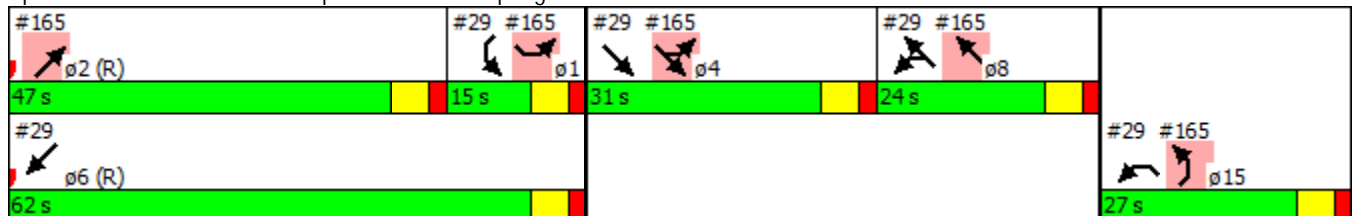


| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|-------------------------|------|-------|-----|-----|-------|-----|-------|-------|-----|-----|-----|-----|
| Detector Phase | 1 4 | 4 | | | 8 | | | 15 | 2 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 5.0 | | | 5.0 | | 5.0 | 4.0 | | | | |
| Minimum Split (s) | | 22.0 | | | 21.0 | | 11.0 | 18.0 | | | | |
| Total Split (s) | | 31.0 | | | 24.0 | | 27.0 | 47.0 | | | | |
| Total Split (%) | | 21.5% | | | 16.7% | | 18.8% | 32.6% | | | | |
| Maximum Green (s) | | 25.0 | | | 18.0 | | 21.0 | 41.0 | | | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | 2.0 | | | 2.0 | | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | 6.0 | 6.0 | | | | |
| Lead/Lag | | Lead | | | Lag | | | Lead | | | | |
| Lead-Lag Optimize? | | Yes | | | Yes | | | Yes | | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | | None | | | Max | | Max | C-Max | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | | |
| Flash Dont Walk (s) | | 11.0 | | | 10.0 | | | 7.0 | | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 24.9 | 9.9 | | | 33.1 | | 21.0 | 41.0 | | | | |
| Actuated g/C Ratio | 0.17 | 0.07 | | | 0.23 | | 0.15 | 0.28 | | | | |
| v/c Ratio | 0.18 | 0.13 | | | 0.17 | | 0.36 | 0.35 | | | | |
| Control Delay | 35.5 | 42.7 | | | 42.5 | | 60.0 | 40.9 | | | | |
| Queue Delay | 0.3 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | | |
| Total Delay | 35.8 | 42.7 | | | 42.5 | | 60.0 | 40.9 | | | | |
| LOS | D | D | | | D | | E | D | | | | |
| Approach Delay | | 38.3 | | | 42.5 | | | 44.9 | | | | |
| Approach LOS | | D | | | D | | | D | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 114 (79%), Referenced to phase 2:NET and 6:, Start of Green |
| Natural Cycle: | 85 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.73 |
| Intersection Signal Delay: | 43.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 47.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 165: Northpark Dr. & Rock Springs



| Lane Group | ø1 | ø6 |
|-----------------------------|------|-------|
| Detector Phase | | |
| Switch Phase | | |
| Minimum Initial (s) | 5.0 | 4.0 |
| Minimum Split (s) | 11.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 |
| Total Split (%) | 10% | 43% |
| Maximum Green (s) | 9.0 | 56.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Recall Mode | Max | C-Max |
| Walk Time (s) | | 5.0 |
| Flash Dont Walk (s) | | 7.0 |
| Pedestrian Calls (#/hr) | | 0 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
167: Northpark Dr. & Mills Branch

AM Peak Hour



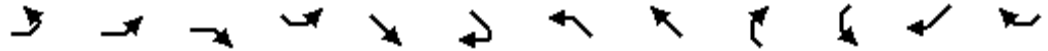
| Lane Group | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕↔ | | | | |
| Volume (vph) | 3 | 146 | 0 | 0 | 434 | 22 | 115 | 43 | 136 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 150 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.988 | | | 0.888 | | | | |
| Flt Protected | | 0.999 | | | | | 0.950 | | | | | |
| Satd. Flow (prot) | 0 | 1861 | 0 | 0 | 1840 | 0 | 1770 | 3143 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.999 | | | | | 0.950 | | | | | |
| Satd. Flow (perm) | 0 | 1861 | 0 | 0 | 1840 | 0 | 1770 | 3143 | 0 | 0 | 0 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | | 30 |
| Link Distance (ft) | | 163 | | | 1511 | | | 1786 | | | | 359 |
| Travel Time (s) | | 3.7 | | | 34.3 | | | 30.4 | | | | 8.2 |
| Peak Hour Factor | 0.75 | 0.78 | 0.92 | 0.92 | 0.92 | 0.50 | 0.72 | 0.83 | 0.89 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 5 | 212 | 0 | 0 | 533 | 50 | 180 | 59 | 173 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 217 | 0 | 0 | 583 | 0 | 180 | 232 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | | 12 |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | | 0 |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | | 16 |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Free | | | Stop | | | Stop | | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Year 2020 No-Build
168: Lake Houston Parkway & Kings Crossing

AM Peak Hour



| Lane Group | EBL2 | EBL | EBR | SEL | SET | SER | NWL | NWT | NWR | SWL | SWR | SWR2 |
|----------------------------|------|---------------|-------|------|------|-------|------|---------------|-------|------|---------------|-------|
| Lane Configurations | | 57 | | | | | | 47 | | | 77 | |
| Volume (vph) | 57 | 28 | 0 | 0 | 0 | 0 | 11 | 1070 | 155 | 0 | 290 | 33 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.88 | 1.00 |
| Frts | | | | | | | | 0.981 | | | 0.850 | |
| Flt Protected | | 0.950 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 3472 | 0 | 0 | 2787 | 0 |
| Flt Permitted | | 0.950 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 3472 | 0 | 0 | 2787 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | | | 17 | | | 157 | |
| Link Speed (mph) | | 30 | | | 40 | | | 40 | | 30 | | |
| Link Distance (ft) | | 148 | | | 829 | | | 954 | | 813 | | |
| Travel Time (s) | | 3.4 | | | 14.1 | | | 16.3 | | 18.5 | | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 70 | 34 | 0 | 0 | 0 | 0 | 14 | 1314 | 190 | 0 | 356 | 41 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 104 | 0 | 0 | 0 | 0 | 0 | 1518 | 0 | 0 | 397 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(ft) | | 24 | | | 0 | | | 0 | | 0 | | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | 0 | | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | 16 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | 15 | 9 | 15 | | 9 | 15 | | 9 | 15 | 9 | 9 |
| Turn Type | Prot | NA | | | | | Prot | NA | | | custom | |
| Protected Phases | 1 4 | 4 | | | | | 15 | 2 | | | 8 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 22.0 | | | | | 11.0 | 17.0 | | | 22.0 | |
| Total Split (s) | | 22.0 | | | | | 11.0 | 80.0 | | | 22.0 | |
| Total Split (%) | | 15.1% | | | | | 7.5% | 54.8% | | | 15.1% | |
| Maximum Green (s) | | 16.0 | | | | | 5.0 | 74.0 | | | 16.0 | |
| Yellow Time (s) | | 4.0 | | | | | 4.0 | 4.0 | | | 4.0 | |
| All-Red Time (s) | | 2.0 | | | | | 2.0 | 2.0 | | | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | 6.0 | | | 6.0 | |
| Lead/Lag | | Lead | | | | | | Lead | | | Lag | |
| Lead-Lag Optimize? | | Yes | | | | | | Yes | | | Yes | |
| Walk Time (s) | | 5.0 | | | | | | 4.0 | | | 4.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | 7.0 | | | 12.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | 0 | | | 0 | |
| Act Effct Green (s) | | 27.0 | | | | | | 79.0 | | | 16.0 | |
| Actuated g/C Ratio | | 0.18 | | | | | | 0.54 | | | 0.11 | |
| v/c Ratio | | 0.16 | | | | | | 2.68dr | | | 0.89 | |
| Control Delay | | 46.4 | | | | | | 282.5 | | | 61.2 | |
| Queue Delay | | 3.9 | | | | | | 0.3 | | | 30.2 | |
| Total Delay | | 50.3 | | | | | | 282.7 | | | 91.4 | |

Year 2020 No-Build
 168: Lake Houston Parkway & Kings Crossing

AM Peak Hour

| Lane Group | ø1 | ø6 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 1 | 6 |
| Permitted Phases | | |
| Minimum Split (s) | 11.0 | 17.0 |
| Total Split (s) | 11.0 | 91.0 |
| Total Split (%) | 8% | 62% |
| Maximum Green (s) | 5.0 | 85.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lag | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | | 4.0 |
| Flash Dont Walk (s) | | 7.0 |
| Pedestrian Calls (#/hr) | | 0 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |

Year 2020 No-Build
 168: Lake Houston Parkway & Kings Crossing

AM Peak Hour

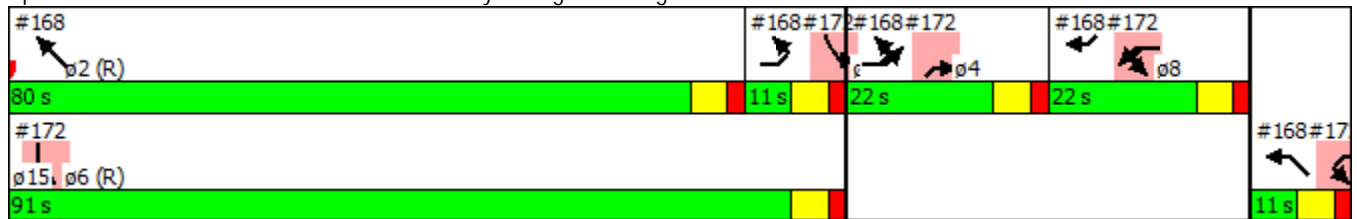


| Lane Group | EBL2 | EBL | EBR | SEL | SET | SER | NWL | NWT | NWR | SWL | SWR | SWR2 |
|----------------|------|------|-----|-----|-----|-----|-----|-------|-----|-----|-----|------|
| LOS | | D | | | | | | F | | | | F |
| Approach Delay | | 50.3 | | | | | | 282.7 | | | | |
| Approach LOS | | D | | | | | | F | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 146 |
| Actuated Cycle Length: | 146 |
| Offset: | 48 (33%), Referenced to phase 2:NWT and 6:, Start of Green |
| Natural Cycle: | 145 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.56 |
| Intersection Signal Delay: | 233.1 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 62.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |







Splits and Phases: 168: Lake Houston Parkway & Kings Crossing



| Lane Group | ø1 | ø6 |
|----------------------|----|----|
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
171: Lake Houston Parkway

AM Peak Hour

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
| Lane Configurations | | ↑↑ | | | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 3539 | 0 | 0 | 0 | 3278 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 3539 | 0 | 0 | 0 | 3278 |
| Link Speed (mph) | | 40 | 40 | | 40 | |
| Link Distance (ft) | | 568 | 1308 | | 1315 | |
| Travel Time (s) | | 9.7 | 22.3 | | 22.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(ft) | | 24 | 24 | | 0 | |
| Link Offset(ft) | | 0 | 0 | | 0 | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 |
| Sign Control | | Free | Free | | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 0.0% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Year 2020 No-Build
172: Kings Crossing & Lake Houston Parkway

AM Peak Hour



| Lane Group | WBL2 | WBL | WBR | SBL2 | SBL | SBR | NWL | NWR | NEL | NER | NER2 | ø2 |
|----------------------------|------|---------------|-------|------|---------------|-------|------|-------|------|---------------|-------|------|
| Lane Configurations | | 57 | | | 57 | | | | | 76 | | |
| Volume (vph) | 284 | 31 | 0 | 27 | 1080 | 18 | 0 | 0 | 0 | 59 | 4 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Util. Factor | 0.95 | 0.97 | 1.00 | 0.95 | 0.97 | 0.95 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 | |
| Frt | | | | | 0.998 | | | | | 0.850 | | |
| Flt Protected | | 0.950 | | | 0.953 | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 3437 | 0 | 0 | 0 | 0 | 2787 | 0 | |
| Flt Permitted | | 0.950 | | | 0.953 | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 3437 | 0 | 0 | 0 | 0 | 2787 | 0 | |
| Right Turn on Red | | | Yes | | | Yes | | | | | | Yes |
| Satd. Flow (RTOR) | | | | | 112 | | | | | 157 | | |
| Link Speed (mph) | | 30 | | | 40 | | 40 | | 30 | | | |
| Link Distance (ft) | | 148 | | | 871 | | 719 | | 472 | | | |
| Travel Time (s) | | 3.4 | | | 14.8 | | 12.3 | | 10.7 | | | |
| 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 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | |
| Adj. Flow (vph) | 349 | 38 | 0 | 33 | 1327 | 22 | 0 | 0 | 0 | 72 | 5 | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 387 | 0 | 0 | 1382 | 0 | 0 | 0 | 0 | 77 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right | |
| Median Width(ft) | | 24 | | | 24 | | 0 | | 0 | | | |
| Link Offset(ft) | | 0 | | | 0 | | 0 | | 0 | | | |
| Crosswalk Width(ft) | | 16 | | | 16 | | 16 | | 16 | | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Turning Speed (mph) | 15 | 15 | 9 | 15 | 15 | 9 | 15 | 9 | 15 | 9 | 9 | |
| Turn Type | Prot | NA | | Prot | NA | | | | | custom | | |
| Protected Phases | 15 8 | 8 | | 1 | 6 | | | | | 4 | | 2 |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 22.0 | | 11.0 | 17.0 | | | | | 22.0 | | 17.0 |
| Total Split (s) | | 22.0 | | 11.0 | 91.0 | | | | | 22.0 | | 80.0 |
| Total Split (%) | | 15.1% | | 7.5% | 62.3% | | | | | 15.1% | | 55% |
| Maximum Green (s) | | 16.0 | | 5.0 | 85.0 | | | | | 16.0 | | 74.0 |
| Yellow Time (s) | | 4.0 | | 4.0 | 4.0 | | | | | 4.0 | | 4.0 |
| All-Red Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | | | 6.0 | | |
| Lead/Lag | | Lag | | Lag | | | | | | Lead | | Lead |
| Lead-Lag Optimize? | | Yes | | Yes | | | | | | Yes | | Yes |
| Walk Time (s) | | 4.0 | | | 4.0 | | | | | 5.0 | | 4.0 |
| Flash Dont Walk (s) | | 12.0 | | | 7.0 | | | | | 11.0 | | 7.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | | 0 |
| Act Effct Green (s) | | 27.0 | | | 85.0 | | | | | 16.0 | | |
| Actuated g/C Ratio | | 0.18 | | | 0.58 | | | | | 0.11 | | |
| v/c Ratio | | 1.07dl | | | 1.30 | | | | | 0.17 | | |
| Control Delay | | 27.4 | | | 171.2 | | | | | 0.8 | | |
| Queue Delay | | 38.1 | | | 0.3 | | | | | 0.0 | | |
| Total Delay | | 65.5 | | | 171.5 | | | | | 0.9 | | |

| | |
|----------------------------|------|
| Lane Group | ø15 |
| Lane Configurations | |
| Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Growth Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Turn Type | |
| Protected Phases | 15 |
| Permitted Phases | |
| Minimum Split (s) | 11.0 |
| Total Split (s) | 11.0 |
| Total Split (%) | 8% |
| Maximum Green (s) | 5.0 |
| Yellow Time (s) | 4.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Walk Time (s) | |
| Flash Dont Walk (s) | |
| Pedestrian Calls (#/hr) | |
| Act Effect Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |

Year 2020 No-Build
 172: Kings Crossing & Lake Houston Parkway

AM Peak Hour

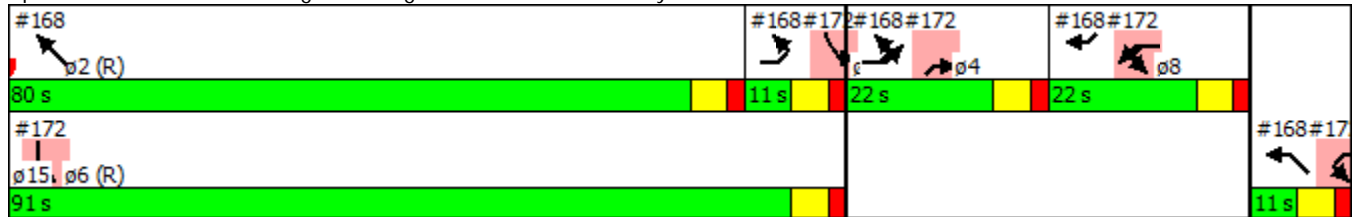


| Lane Group | WBL2 | WBL | WBR | SBL2 | SBL | SBR | NWL | NWR | NEL | NER | NER2 | ø2 |
|----------------|------|------|-----|------|-------|-----|-----|-----|-----|-----|------|----|
| LOS | | E | | | F | | | | | | A | |
| Approach Delay | | 65.5 | | | 171.5 | | | | | | | |
| Approach LOS | | E | | | F | | | | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 146 |
| Actuated Cycle Length: | 146 |
| Offset: | 48 (33%), Referenced to phase 2:NWT and 6:, Start of Green |
| Natural Cycle: | 145 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.56 |
| Intersection Signal Delay: | 142.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 64.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| dl | Defacto Left Lane. Recode with 1 though lane as a left lane. |

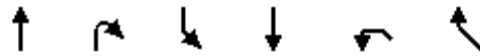
Splits and Phases: 172: Kings Crossing & Lake Houston Parkway



| | |
|----------------------|-----|
| Lane Group | ø15 |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Intersection Summary | |

Year 2020 No-Build
174: Lake Houston Parkway

AM Peak Hour



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3539 | 0 | 3278 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3539 | 0 | 3278 |
| Link Speed (mph) | 40 | | | 40 | 30 | |
| Link Distance (ft) | 672 | | | 450 | 712 | |
| Travel Time (s) | 11.5 | | | 7.7 | 16.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 24 | | | 24 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 15 | 15 | | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|-----------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% ICU Level of Service A |
| Analysis Period (min) | 15 |

Year 2020 No-Build
 175: Lake Houston Parkway & Rustic Woods

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | ↑↑ | | | | | ↑ | ↑↑ | |
| Volume (vph) | 0 | 42 | 134 | 113 | 92 | 0 | 0 | 0 | 0 | 15 | 1093 | 12 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.886 | | | | | | | | | 0.998 | |
| Flt Protected | | | | | 0.973 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3136 | 0 | 0 | 3444 | 0 | 0 | 0 | 0 | 1770 | 3532 | 0 |
| Flt Permitted | | | | | 0.973 | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3136 | 0 | 0 | 3444 | 0 | 0 | 0 | 0 | 1770 | 3532 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 165 | | | | | | | | | 1 | |
| Link Speed (mph) | | 30 | | | 30 | | | 40 | | | 40 | |
| Link Distance (ft) | | 576 | | | 82 | | | 1315 | | | 563 | |
| Travel Time (s) | | 13.1 | | | 1.9 | | | 22.4 | | | 9.6 | |
| 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 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 52 | 165 | 139 | 113 | 0 | 0 | 0 | 0 | 18 | 1342 | 15 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 217 | 0 | 0 | 252 | 0 | 0 | 0 | 0 | 18 | 1357 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway 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 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Turn Type | | NA | | Prot | NA | | | | | Prot | NA | |
| Protected Phases | | 4 | | 15 | 8 | | | | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 11.0 | | | 19.0 | | | | | 11.0 | 10.0 | |
| Total Split (s) | | 17.0 | | | 21.0 | | | | | 13.0 | 84.0 | |
| Total Split (%) | | 11.8% | | | 14.6% | | | | | 9.0% | 58.3% | |
| Maximum Green (s) | | 11.0 | | | 15.0 | | | | | 7.0 | 78.0 | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | | | 6.0 | 6.0 | |
| Lead/Lag | | Lead | | | Lag | | | | | Lag | | |
| Lead-Lag Optimize? | | Yes | | | Yes | | | | | Yes | | |
| Walk Time (s) | | | | | 6.0 | | | | | | | |
| Flash Dont Walk (s) | | | | | 7.0 | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | | | | | | | |
| Act Effct Green (s) | | 11.0 | | | 37.0 | | | | | 7.0 | 78.0 | |
| Actuated g/C Ratio | | 0.08 | | | 0.26 | | | | | 0.05 | 0.54 | |
| v/c Ratio | | 0.55 | | | 0.29 | | | | | 0.21 | 0.71 | |

| Lane Group | ø2 | ø15 |
|----------------------------|------|------|
| Lane Configurations | | |
| Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Turn Type | | |
| Protected Phases | 2 | 15 |
| Permitted Phases | | |
| Minimum Split (s) | 20.0 | 11.0 |
| Total Split (s) | 71.0 | 22.0 |
| Total Split (%) | 49% | 15% |
| Maximum Green (s) | 65.0 | 16.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | |
| Lead-Lag Optimize? | Yes | |
| Walk Time (s) | 4.0 | |
| Flash Dont Walk (s) | 10.0 | |
| Pedestrian Calls (#/hr) | 0 | |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |

Year 2020 No-Build
 175: Lake Houston Parkway & Rustic Woods

AM Peak Hour



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| Control Delay | | 23.3 | | | 3.5 | | | | | 71.8 | 27.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | |
| Total Delay | | 23.3 | | | 3.5 | | | | | 71.8 | 27.1 | |
| LOS | | C | | | A | | | | | E | C | |
| Approach Delay | | 23.3 | | | 3.5 | | | | | | 27.7 | |
| Approach LOS | | C | | | A | | | | | | C | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 144 |
| Actuated Cycle Length: | 144 |
| Offset: | 90 (63%), Referenced to phase 2:NBT and 6:, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.71 |
| Intersection Signal Delay: | 23.9 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 62.9% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 175: Lake Houston Parkway & Rustic Woods

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| #111 ↑ ϕ2 (R) 71 s | #111#175 ↑ ϕ1 13 s | #111#175 → ϕ4 17 s | #111#175 ← ϕ8 21 s | |
| #175 ↓ ϕ6 (R) 84 s | | | | #111#175 ↑ ϕ15 22 s |

| Lane Group | ø2 | ø15 |
|----------------------|----|-----|
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |
| Intersection Summary | | |

Year 2020 No-Build
178: Lake Houston Parkway

AM Peak Hour



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | | TT | | | TT |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3614 | 0 | 0 | 3278 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3614 | 0 | 0 | 3278 |
| Link Speed (mph) | 40 | | | 40 | 40 | |
| Link Distance (ft) | 216 | | | 426 | 4598 | |
| Travel Time (s) | 3.7 | | | 7.3 | 78.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 48 | | | 48 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 15 | 15 | | 9 |
| Sign Control | Stop | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|-----------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 0.0% ICU Level of Service A |
| Analysis Period (min) | 15 |



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 121 | 4 | 305 | 217 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | | 0 | 150 | | 0 | 0 |
| Storage Lanes | | 0 | 1 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 1855 | 0 | 1770 | 1863 | 1863 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 1855 | 0 | 1770 | 1863 | 1863 | 0 |
| Link Speed (mph) | 35 | | | 35 | 30 | |
| Link Distance (ft) | 123 | | | 358 | 309 | |
| Travel Time (s) | 2.4 | | | 7.0 | 7.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 149 | 5 | 375 | 267 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 154 | 0 | 375 | 267 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 12 | | | 12 | 12 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Year 2020 No-Build
188: Sorters & Northpark Dr.

AM Peak Hour



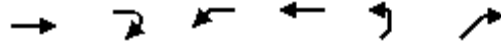
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|------|
| Lane Configurations | | | ↔ | | | ↕ |
| Volume (vph) | 0 | 0 | 71 | 15 | 0 | 341 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.977 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1820 | 0 | 0 | 1863 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1820 | 0 | 0 | 1863 |
| Link Speed (mph) | 40 | | 35 | | | 30 |
| Link Distance (ft) | 1492 | | 3855 | | | 70 |
| Travel Time (s) | 25.4 | | 75.1 | | | 1.6 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 87 | 18 | 0 | 419 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 105 | 0 | 0 | 419 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 0 | | 0 | | | 0 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Sign Control | Stop | | Free | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 23.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Year 2020 No-Build
189: Northpark Dr.

AM Peak Hour



| Lane Group | EBT | EBR | WBL | WBT | NEL | NER |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 213 | 0 | 377 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3539 | 0 | 2787 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3539 | 0 | 2787 |
| Link Speed (mph) | 40 | | | 40 | 30 | |
| Link Distance (ft) | 1488 | | | 3907 | 1492 | |
| Travel Time (s) | 25.4 | | | 66.6 | 33.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 262 | 0 | 463 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 262 | 0 | 463 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 0 | | | 0 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Sign Control | Free | | | Free | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 18.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | | | ↑↑ | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3539 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3539 | 0 | 0 |
| Link Speed (mph) | 40 | | | 40 | 30 | |
| Link Distance (ft) | 392 | | | 804 | 60 | |
| Travel Time (s) | 6.7 | | | 13.7 | 1.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(ft) | 0 | | | 0 | 0 | |
| Link Offset(ft) | 0 | | | 0 | 0 | |
| Crosswalk Width(ft) | 16 | | | 16 | 16 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 9 | | 15 | 15 | | 9 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 6.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |