

E Cherokee DR Corridor Study – Appendix



Prepared For:
Cherokee County



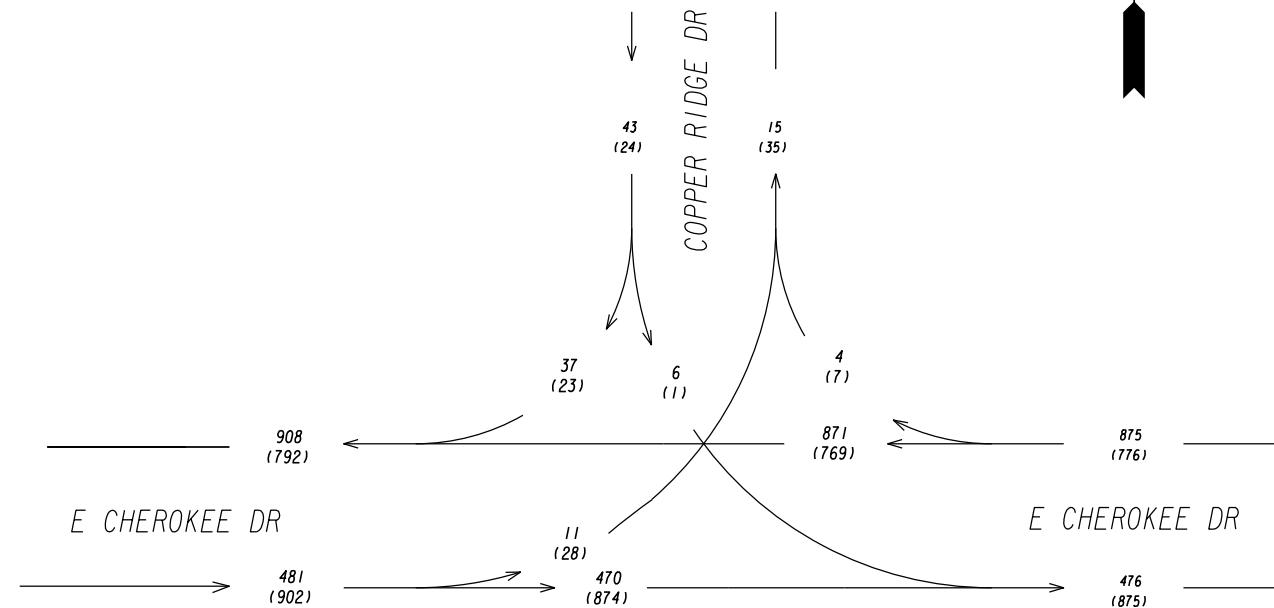
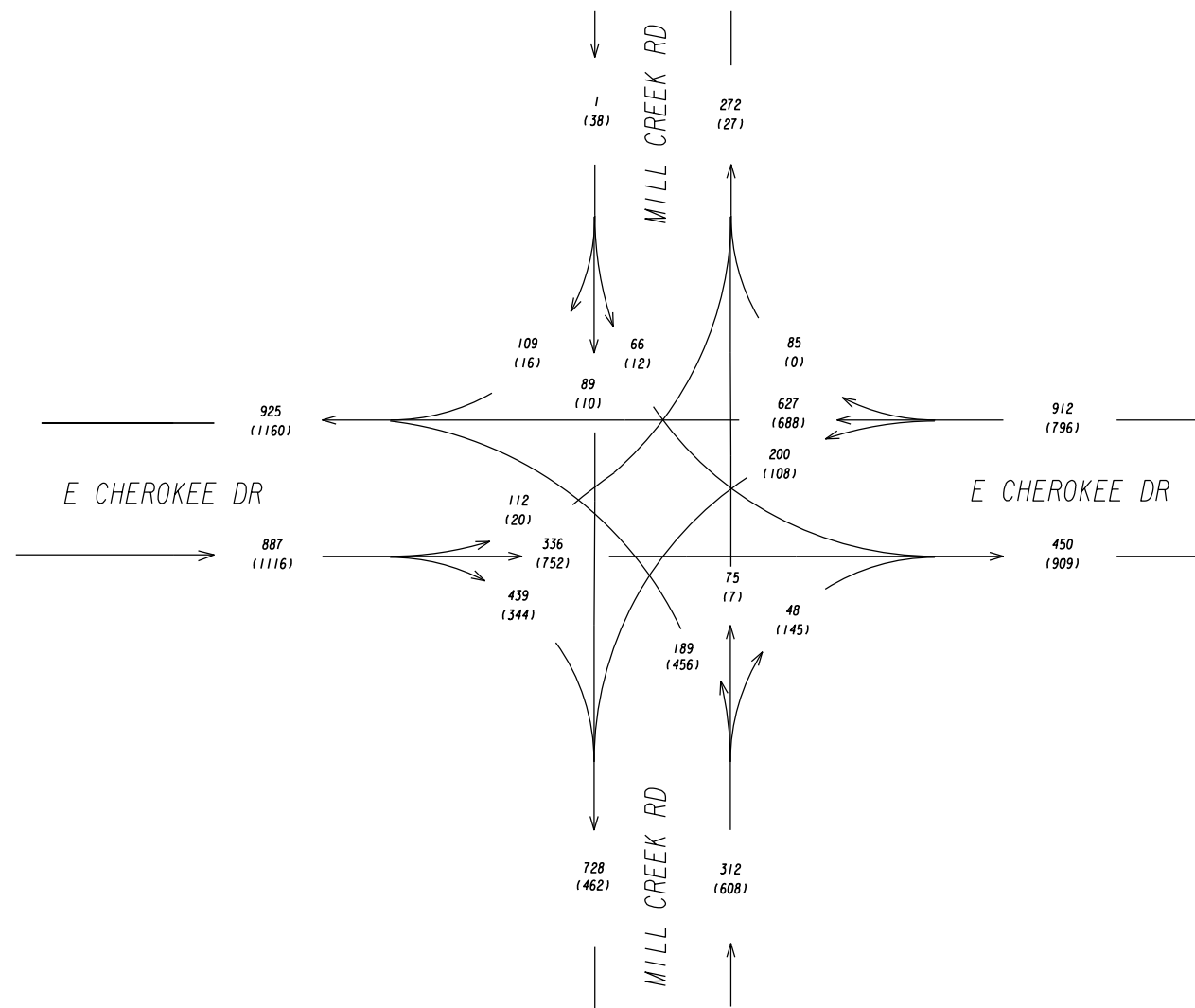
Prepared By:
Lowe Engineers



1/21/2021

Appendix A: Traffic Diagrams and Traffic Count Data





2019 DHV
AM (PM)

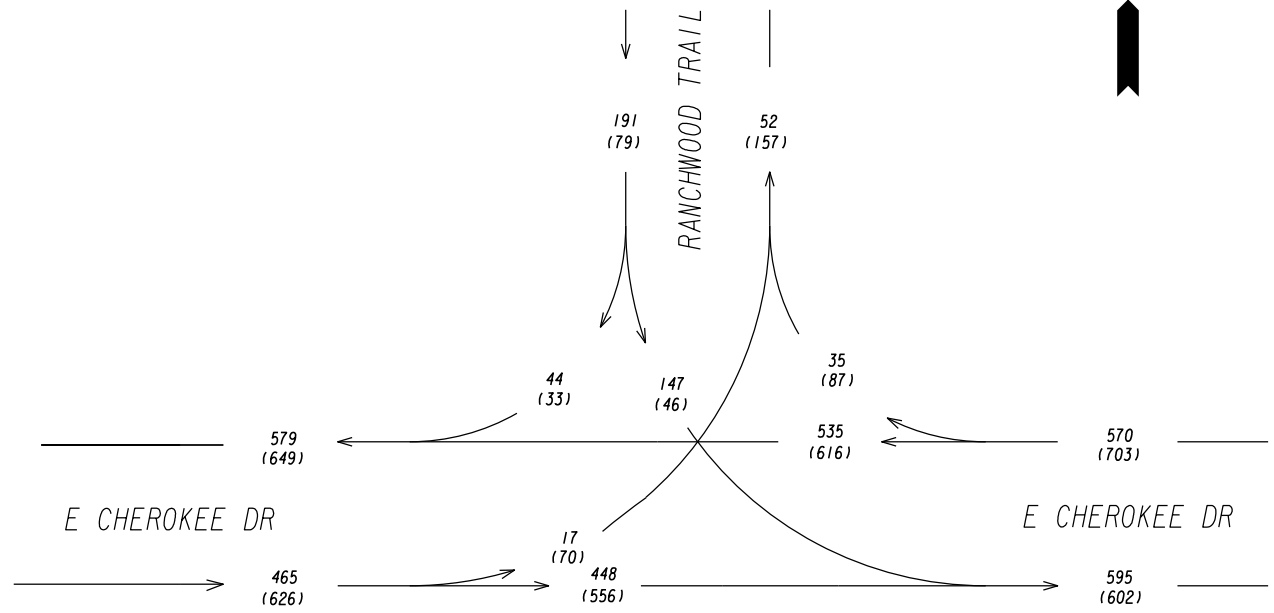
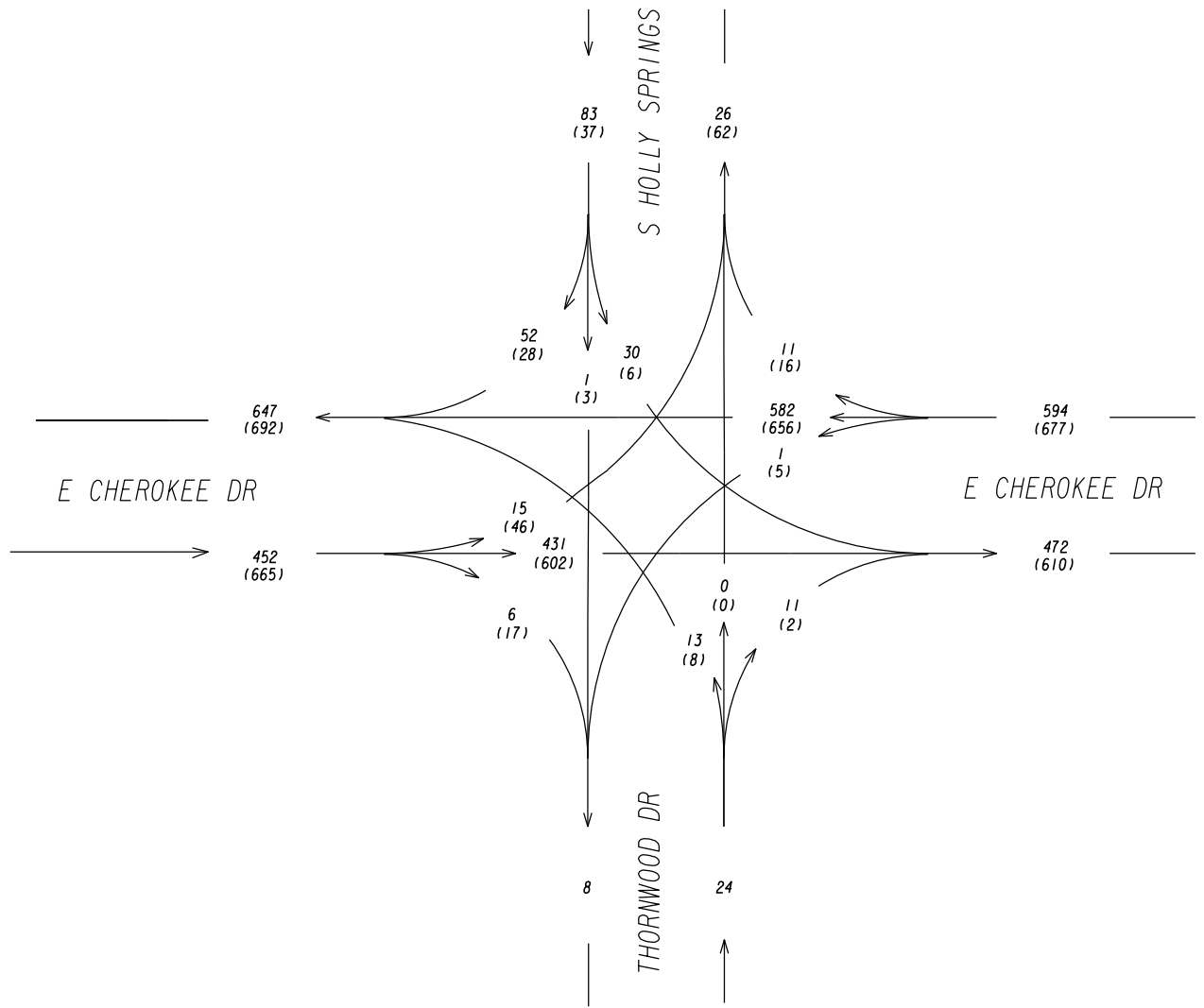
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TRAFFIC DIAGRAM
E CHEROKEE DR @ MILL CREEK RD
E CHEROKEE DR @ COPPER RIDGE DR

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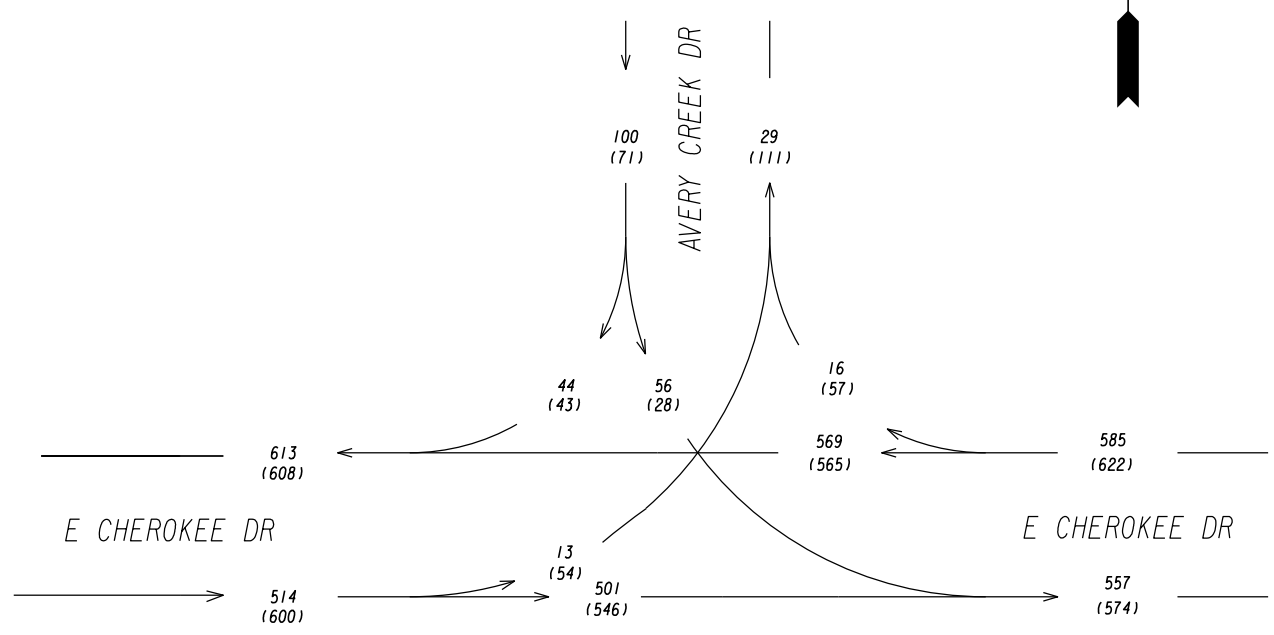
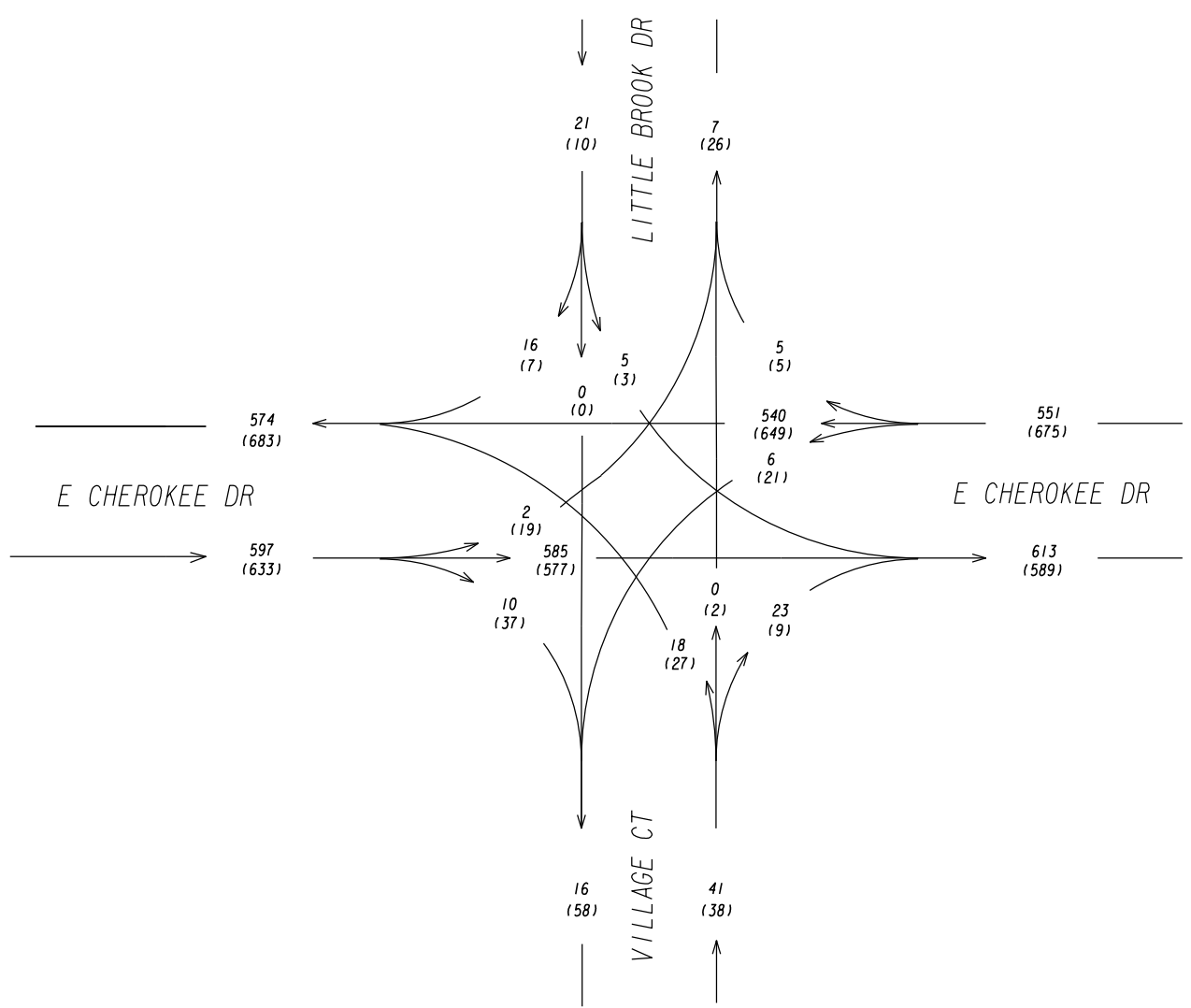
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TRAFFIC DIAGRAM
E CHEROKEE DR @ HOLLY SPRINGS/
THORNWOOD DR
E CHEROKEE DR @ RANCHWOOD TRAIL

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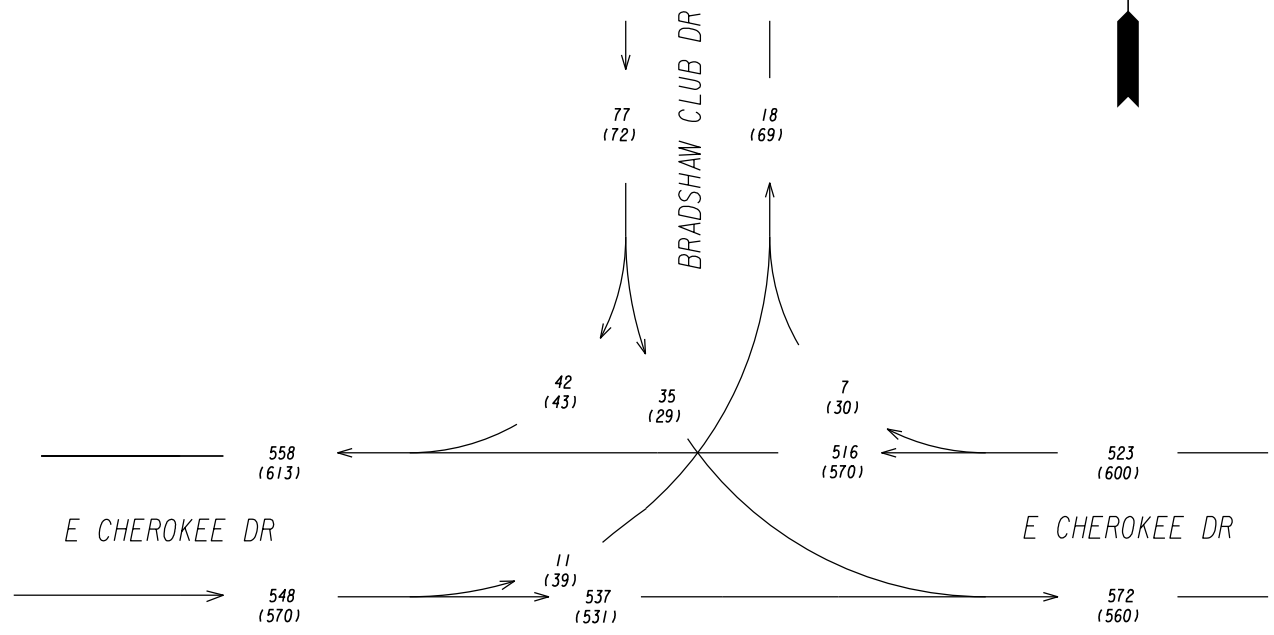
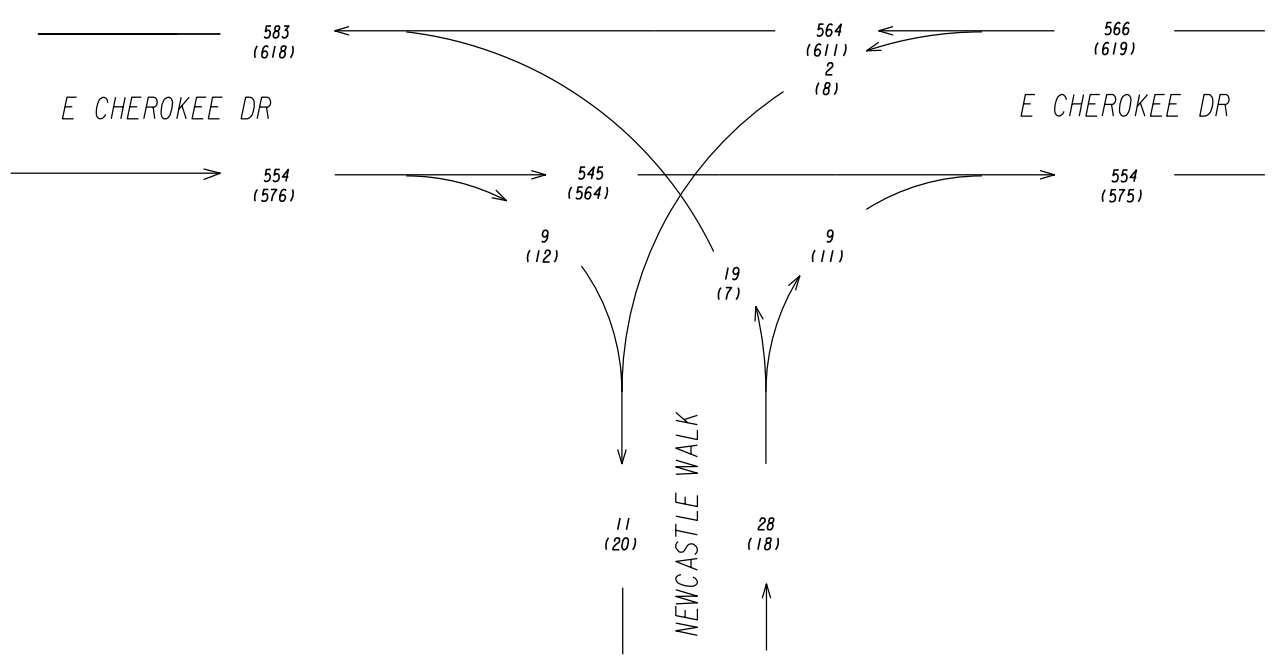
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TRAFFIC DIAGRAM
E CHEROKEE DR @ LITTLE BROOK DR/
VILLAGE CT
E CHEROKEE DR @ AVERY CREEK DR

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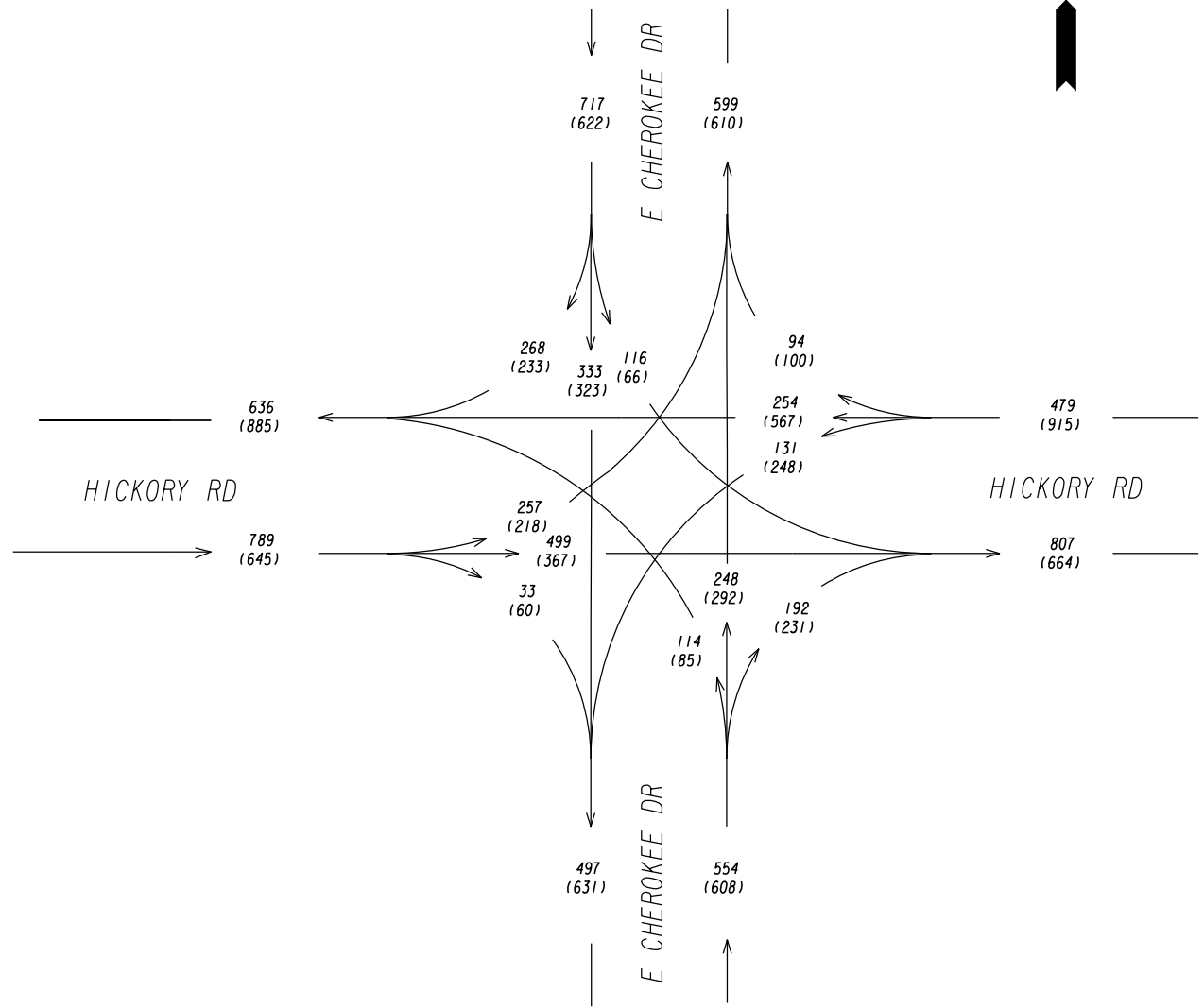
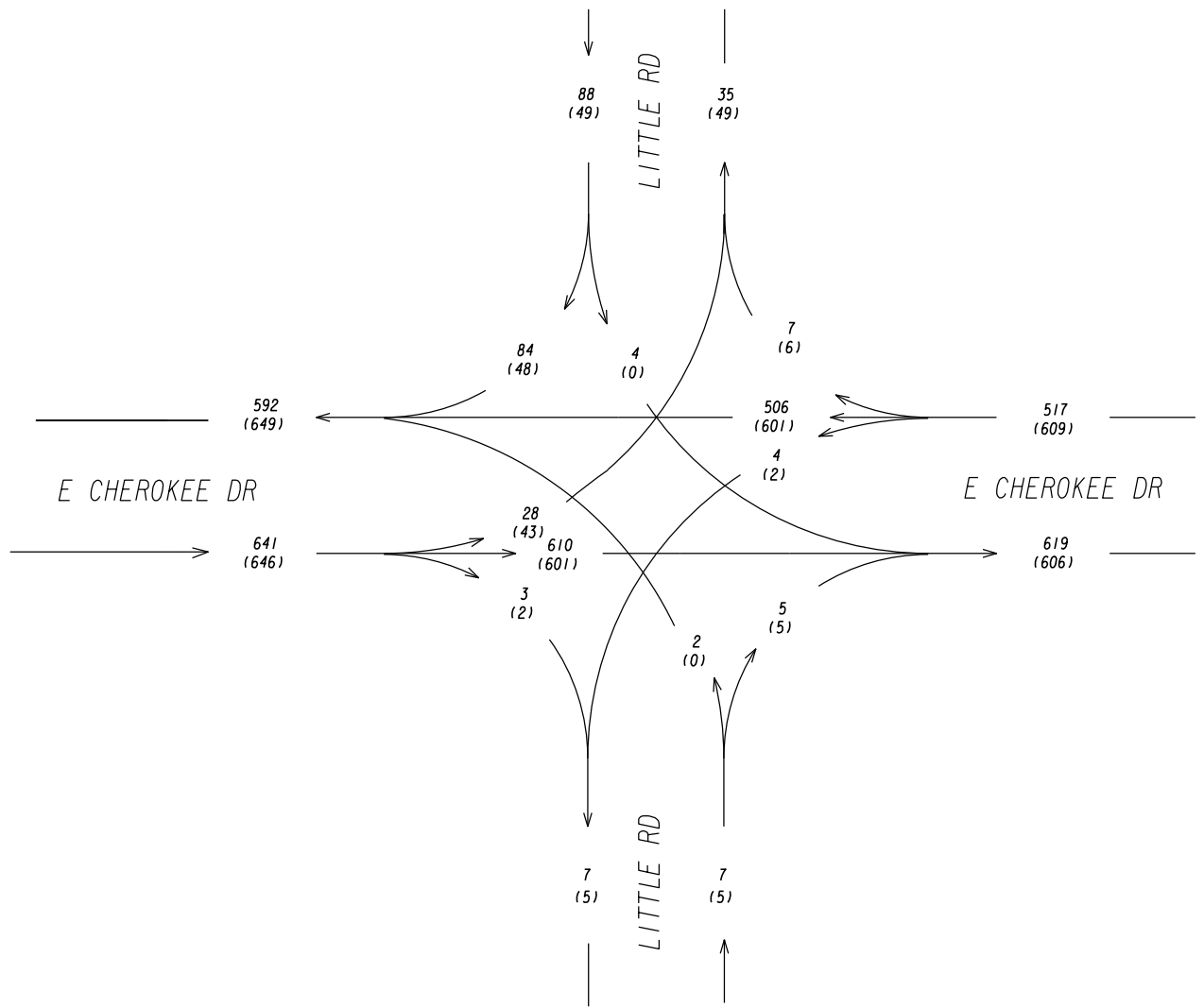
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ NEWCASTLE WALK
E. CHEROKEE DR @ BRADSHAW CLUB DR

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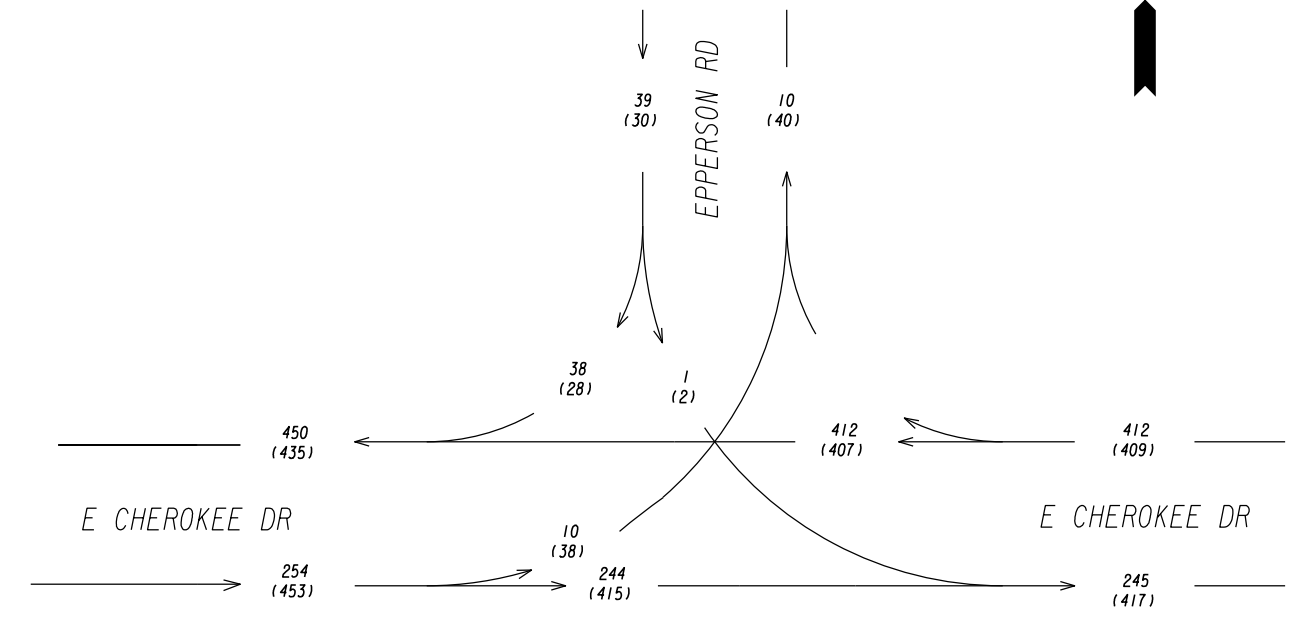
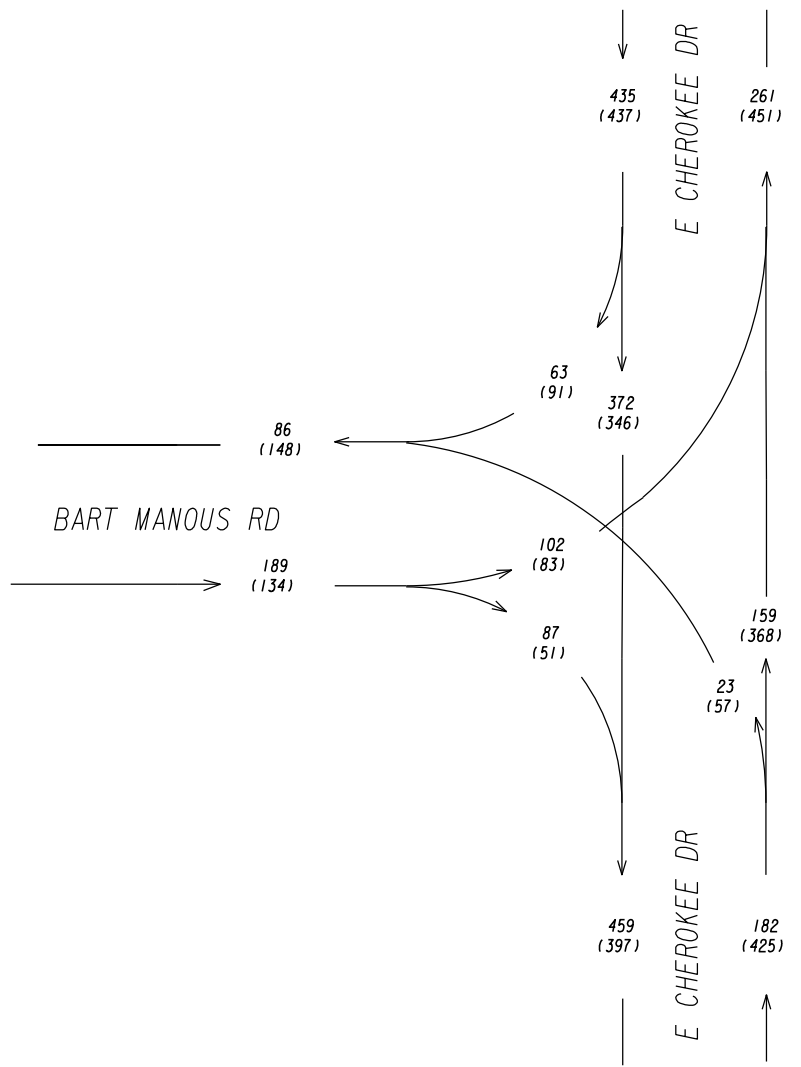


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TRAFFIC DIAGRAM
E. CHEROKEE DR @ LITTLE RD
E. CHEROKEE DR @ HICKORY RD

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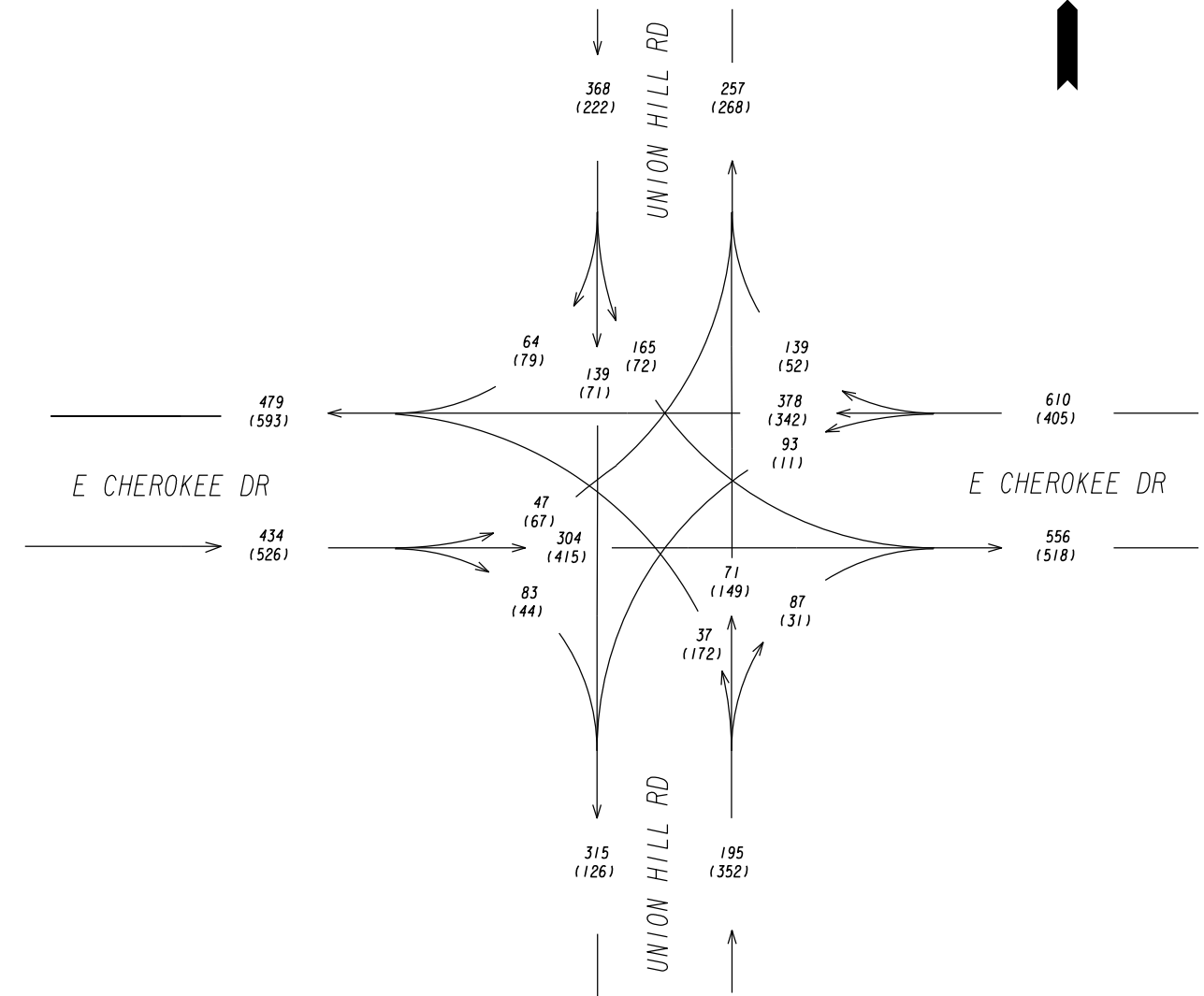
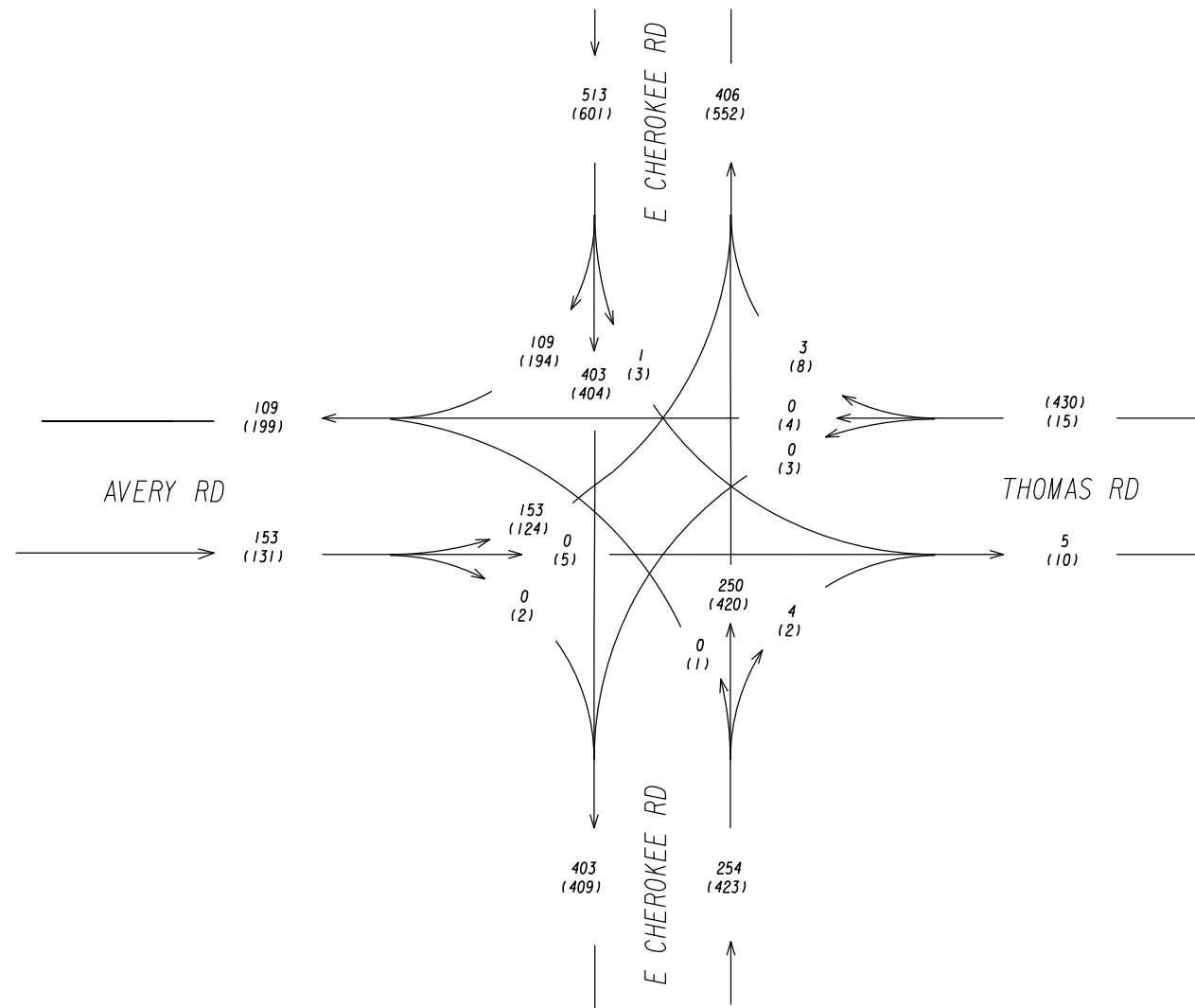
2019 DHV
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ BART MANOUS RD
E. CHEROKEE DR @ EPPERSON RD

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2019 DHV
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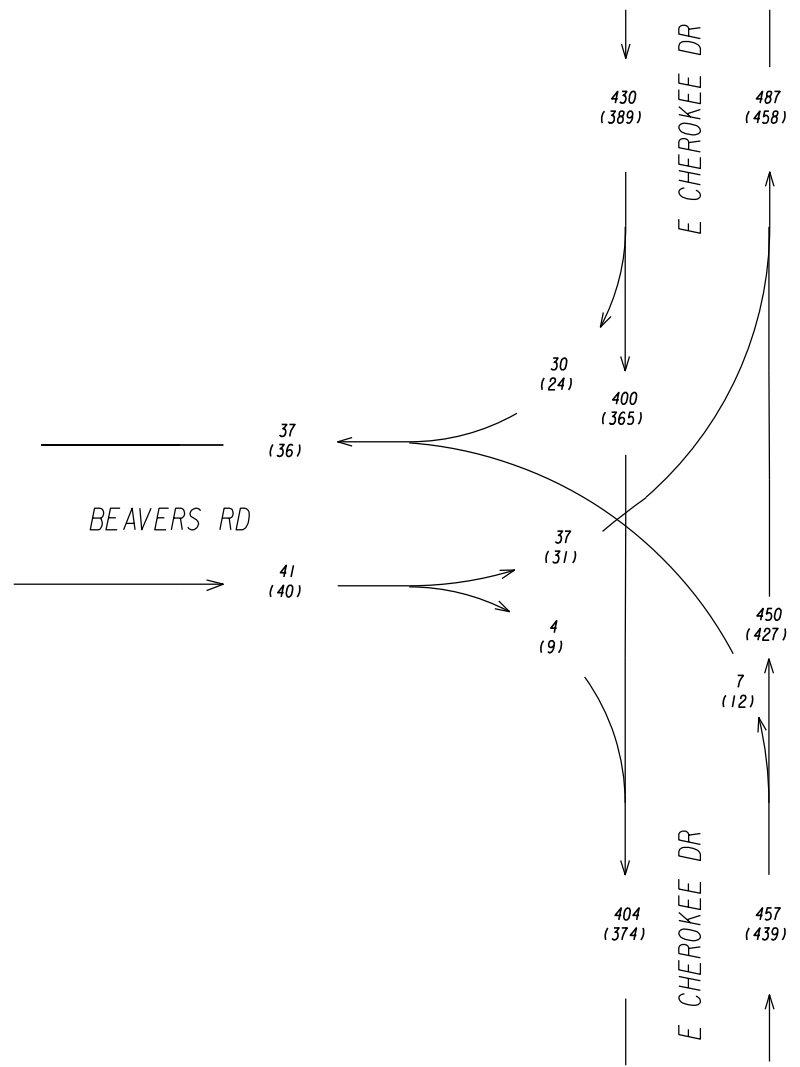
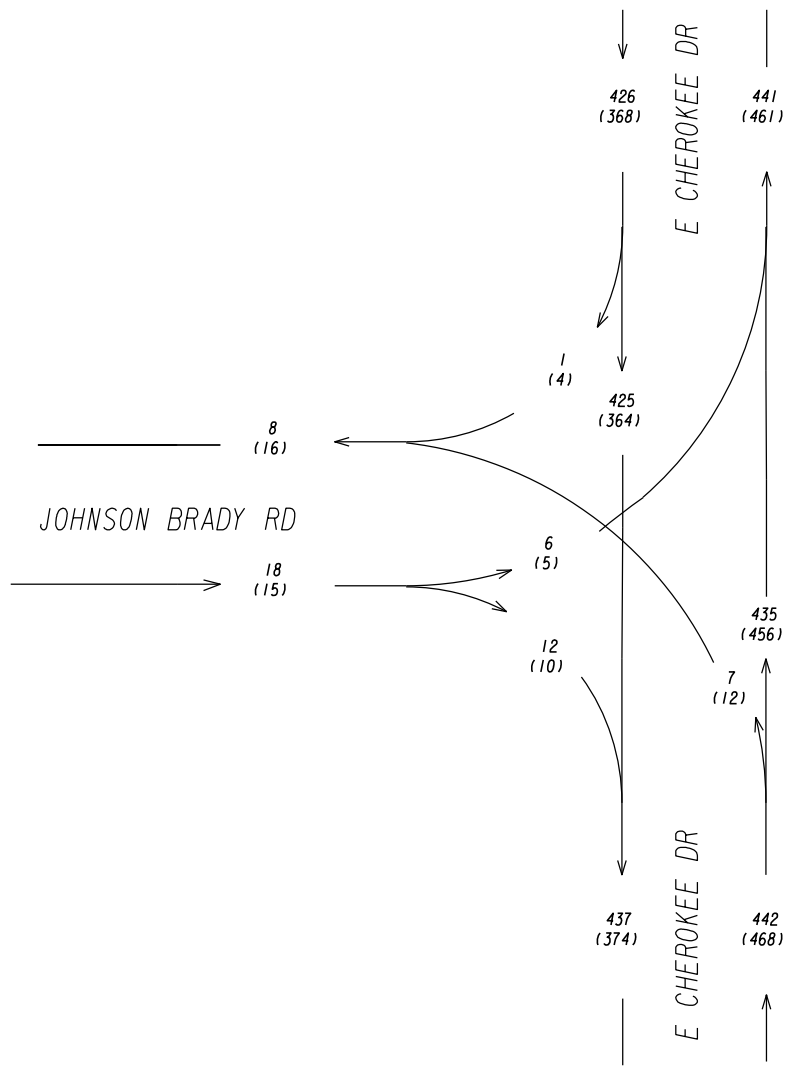
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ AVERY RD
E. CHEROKEE DR @ UNION HILL

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2019 DHV
AM (PM)

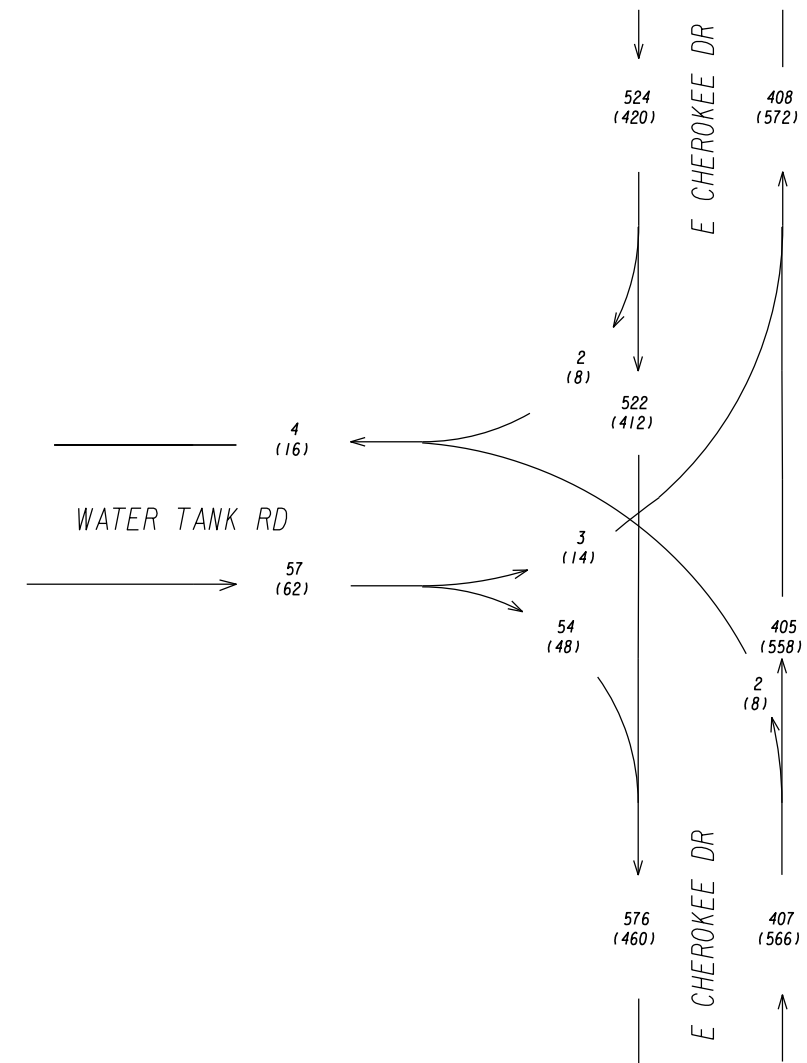
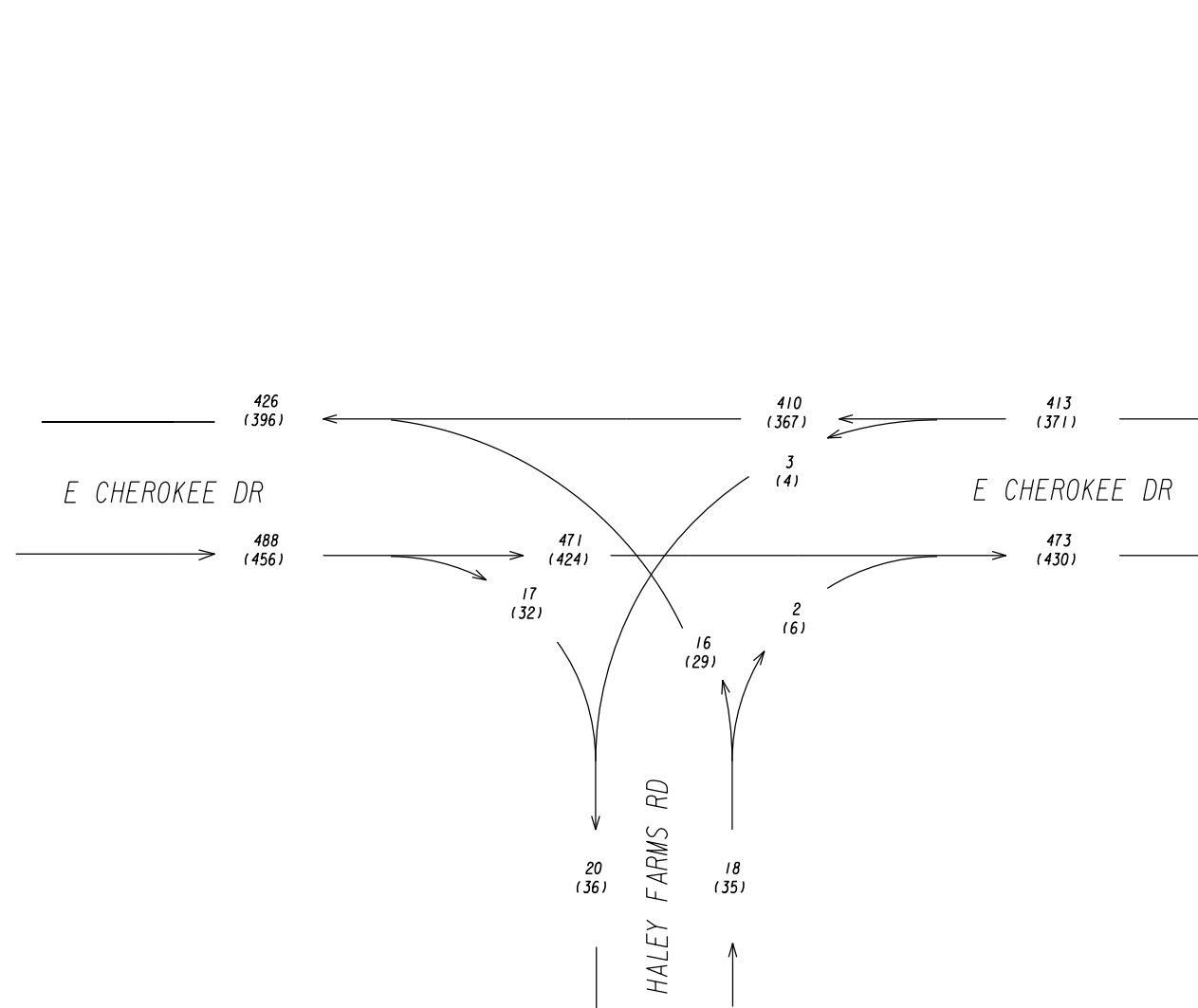
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ JOHNSON BRADY RD
E. CHEROKEE DR @ BEAVERS RD

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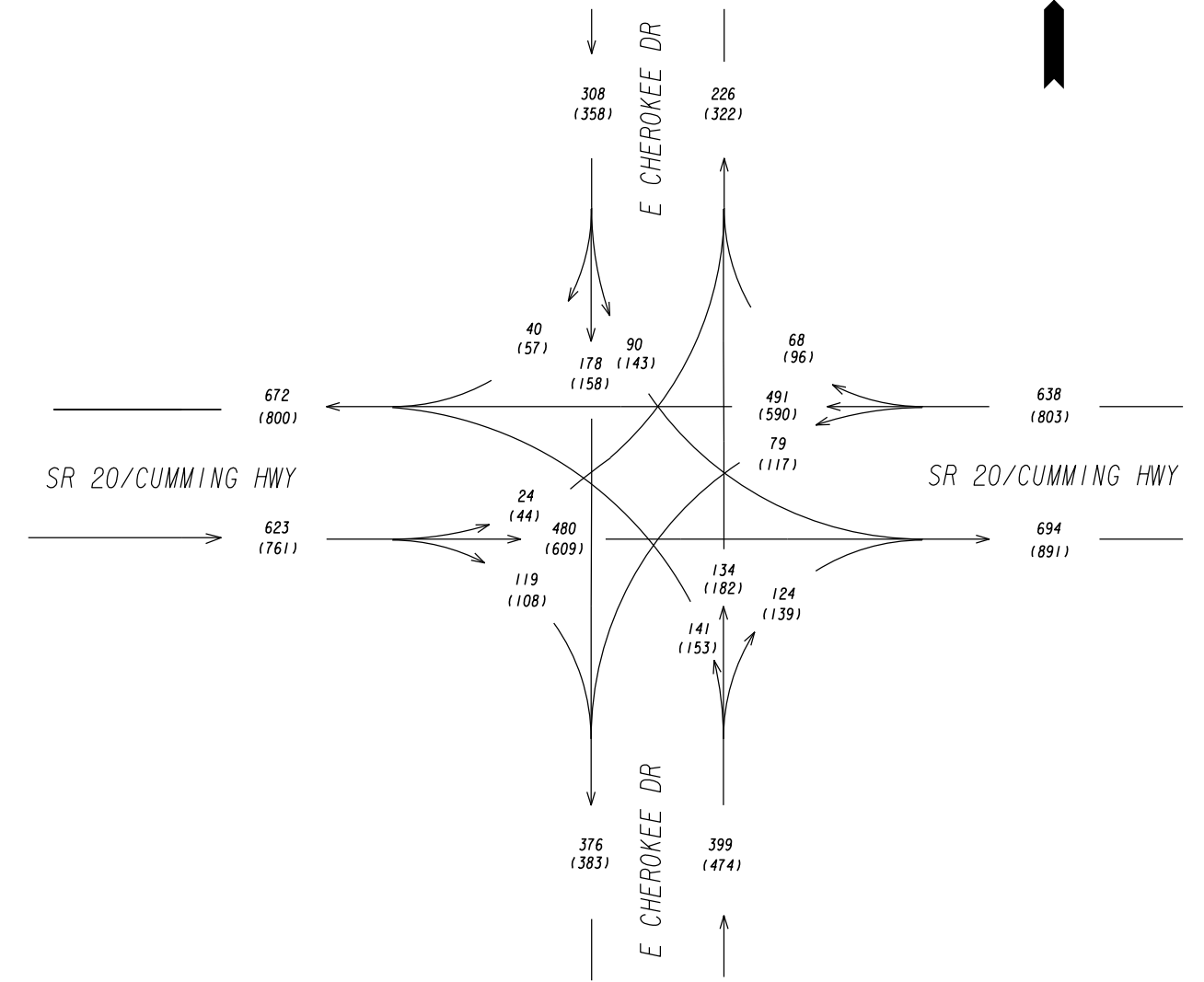
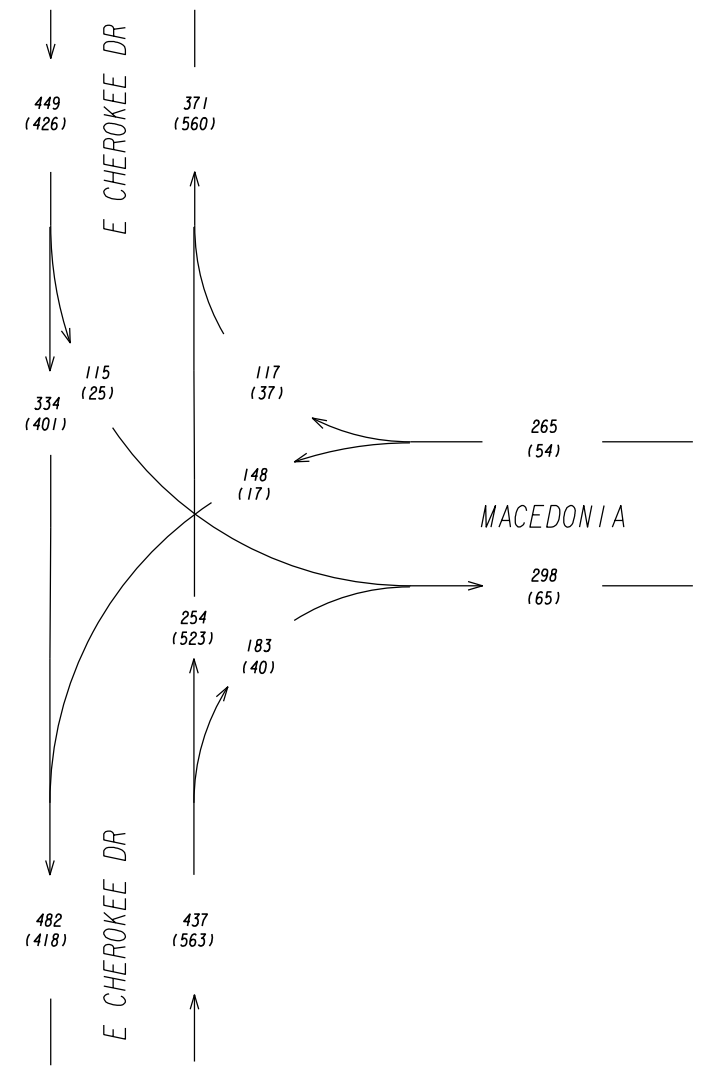
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ HALEY FARMS RD
E. CHEROKEE DR @ WATER TANK RD

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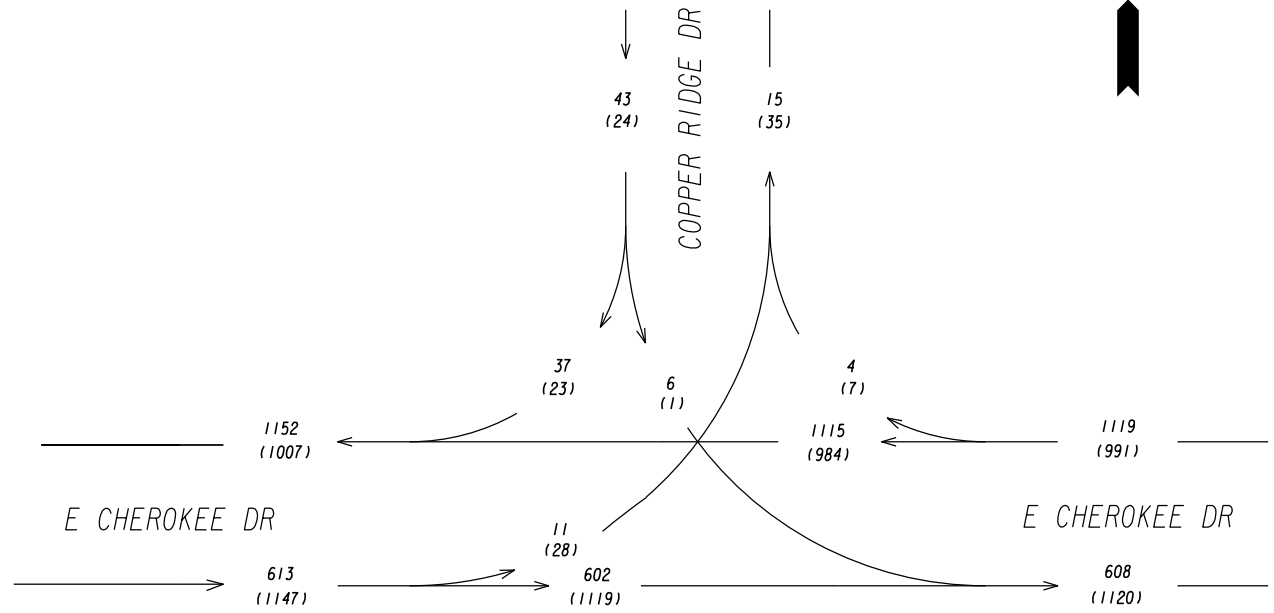
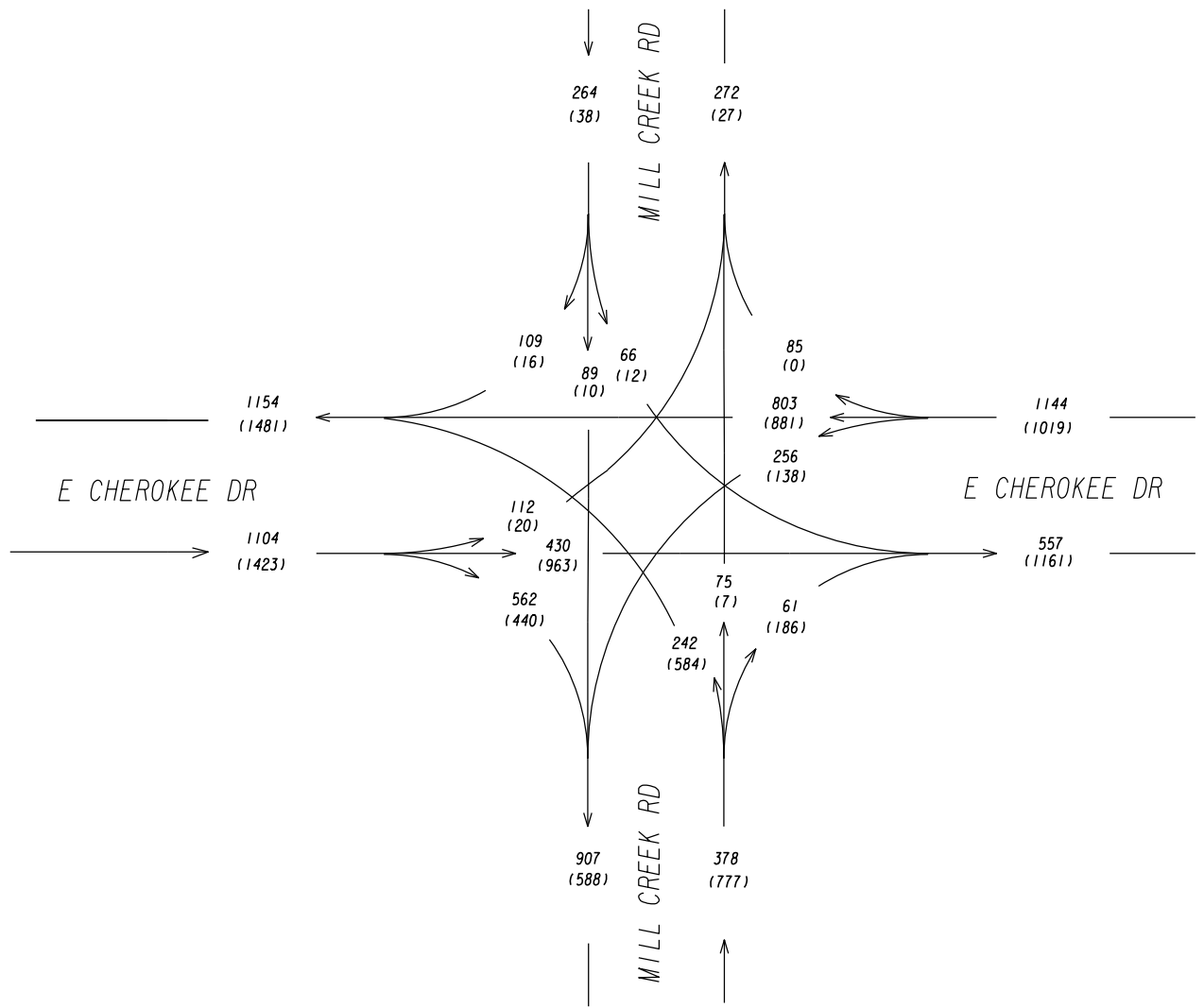
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ MACEDONIA
E. CHEROKEE DR @ SR 20/ CUMMING HWY

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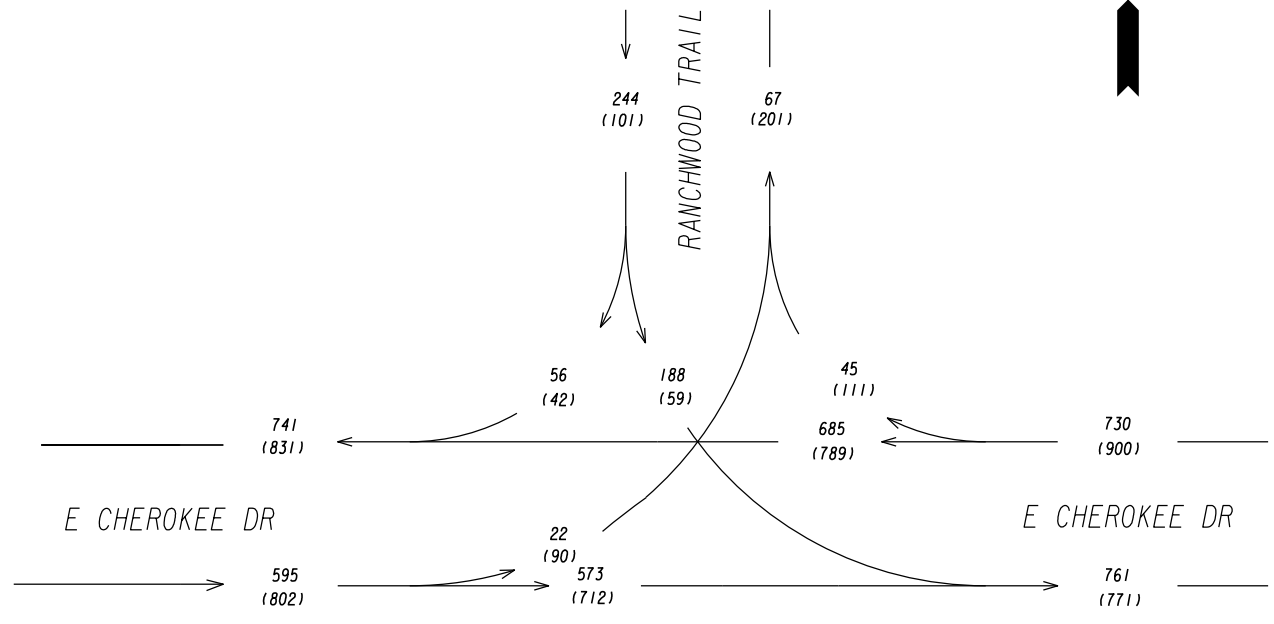
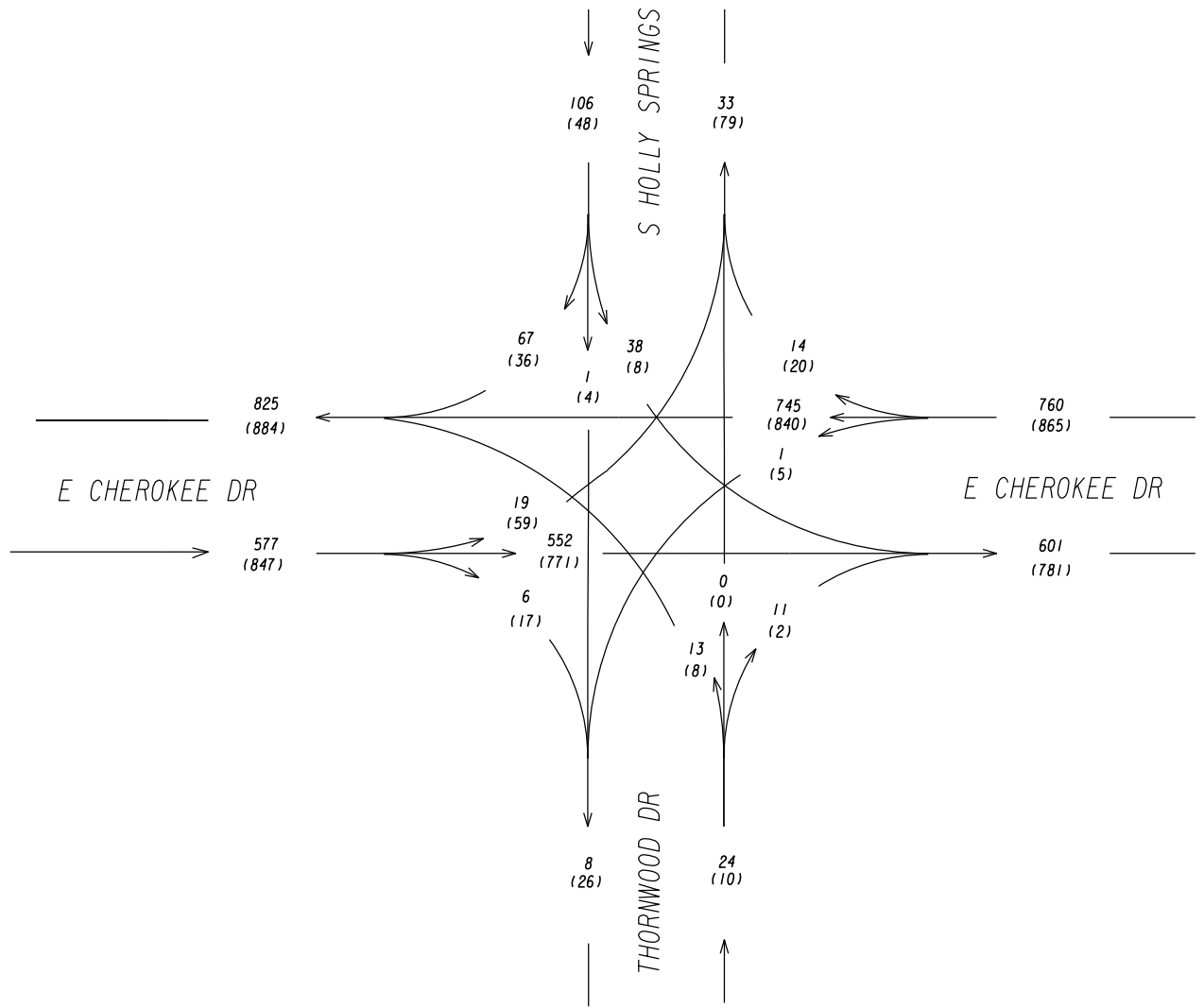
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TRAFFIC DIAGRAM
E CHEROKEE DR @ MILL CREEK RD
E CHEROKEE DR @ COPPER RIDGE DR

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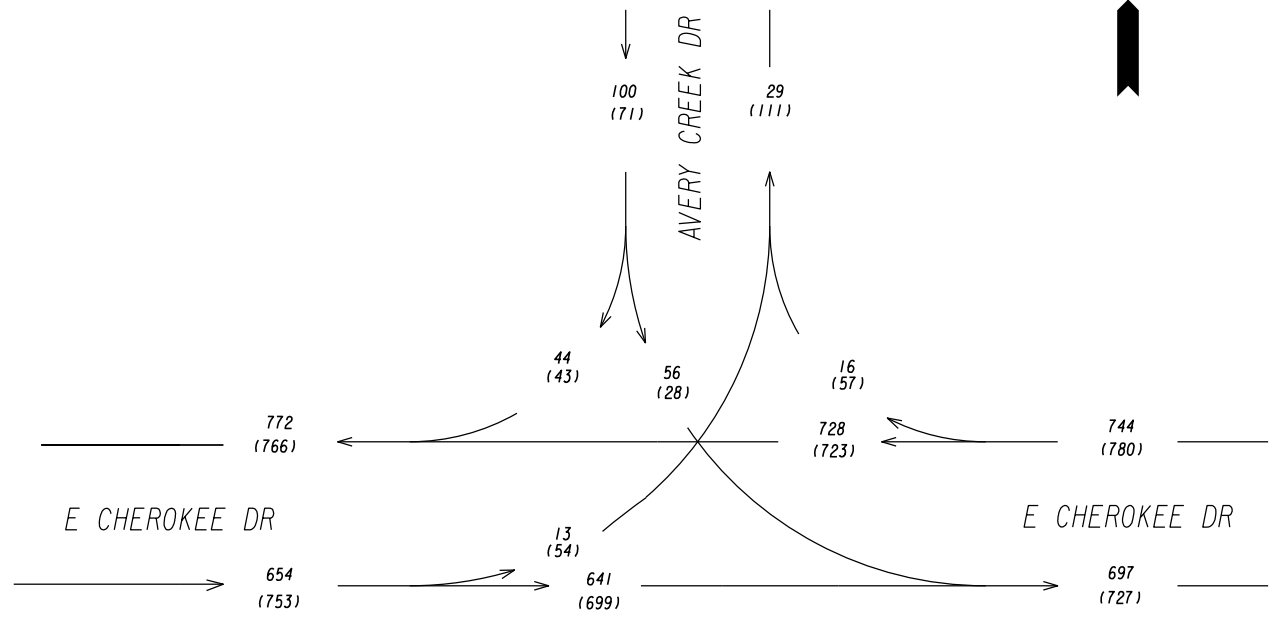
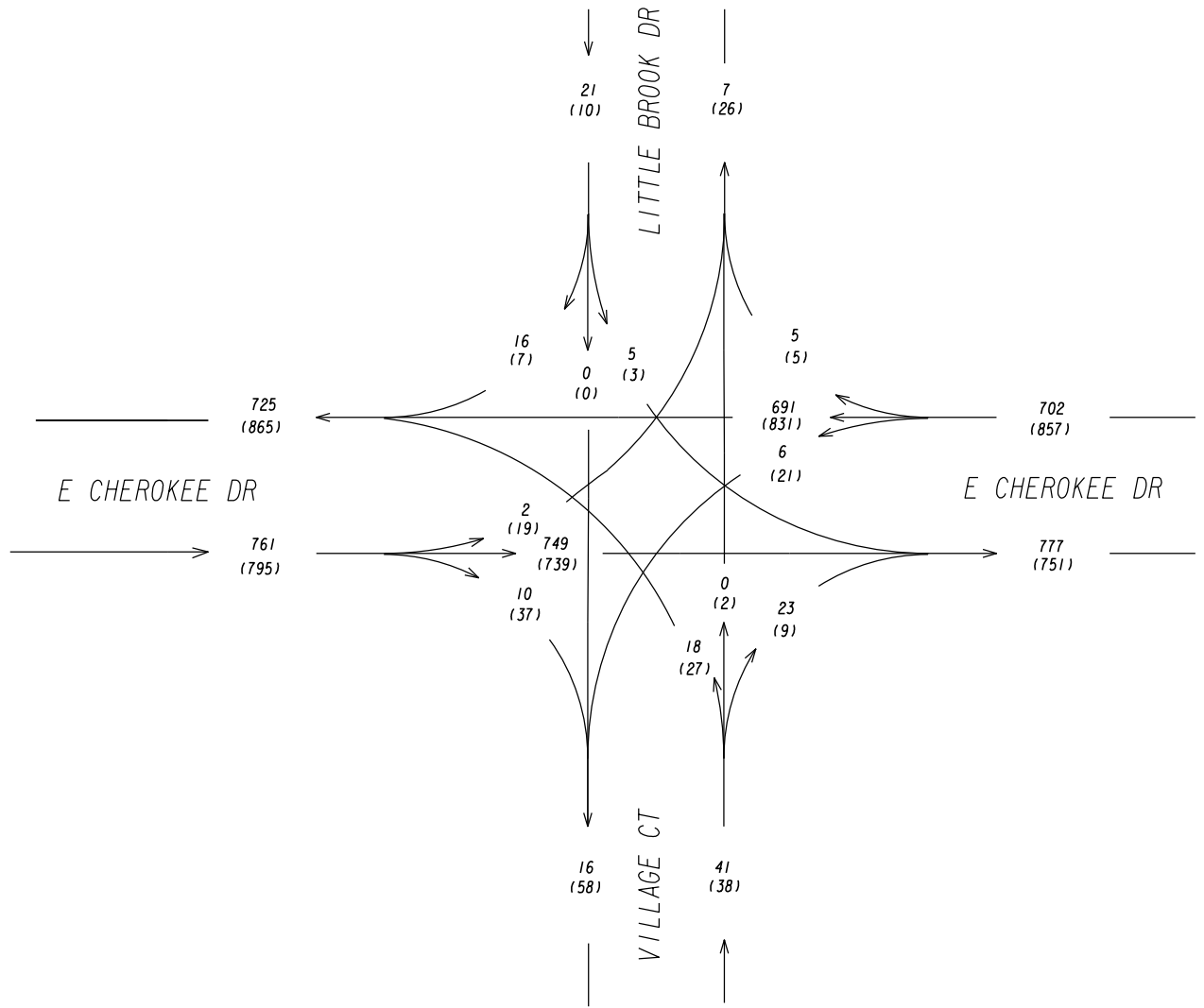
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TRAFFIC DIAGRAM
E CHEROKEE DR @ HOLLY SPRINGS/
THORNWOOD DR
E CHEROKEE DR @ RANCHWOOD TRAIL

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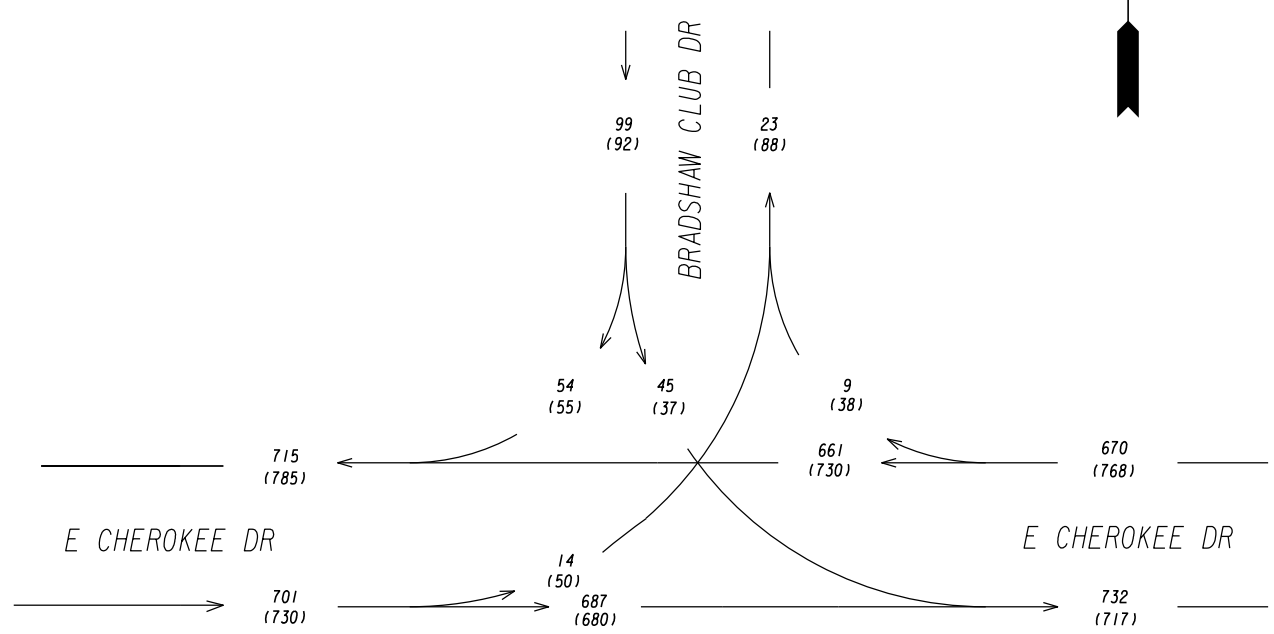
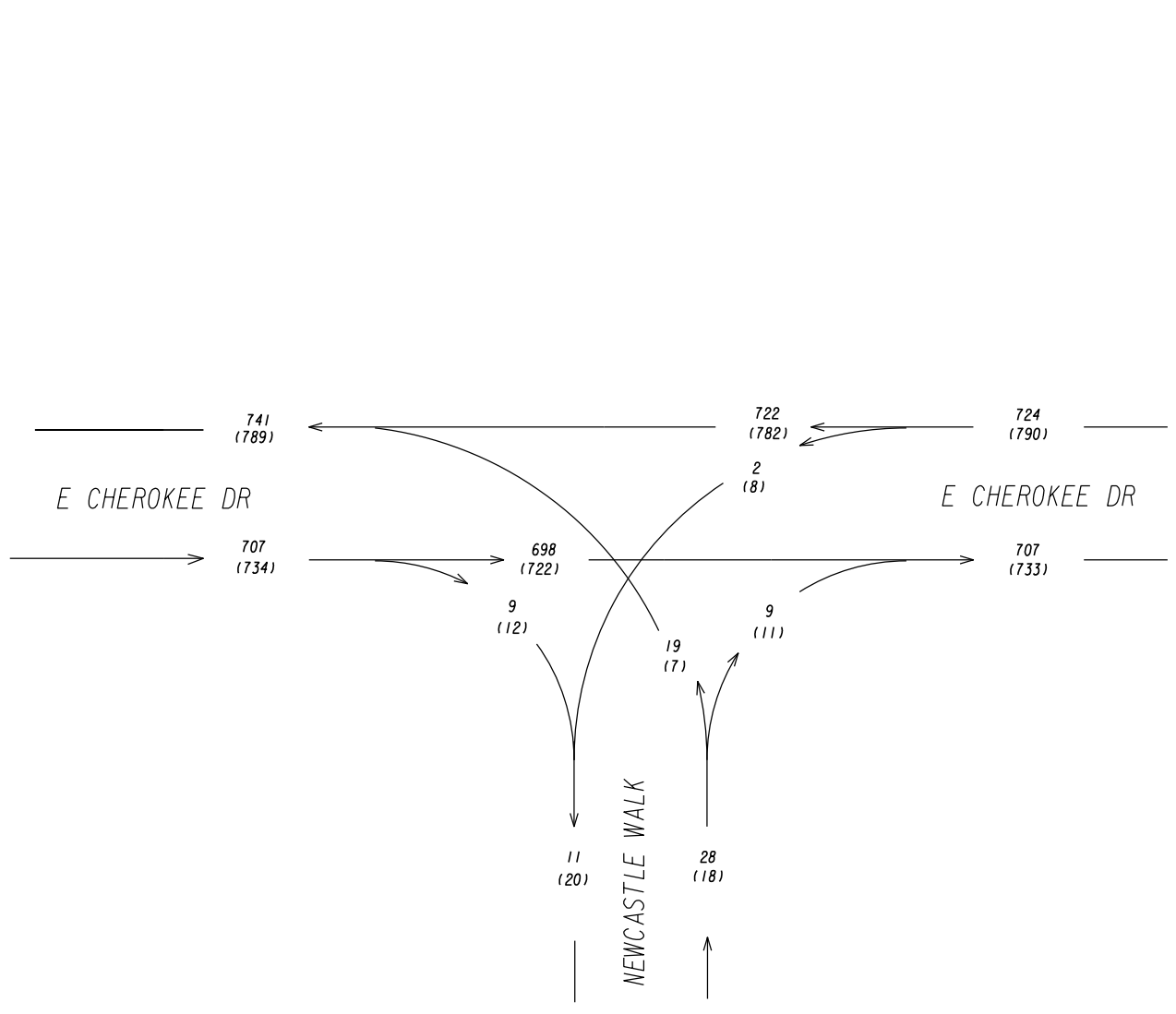
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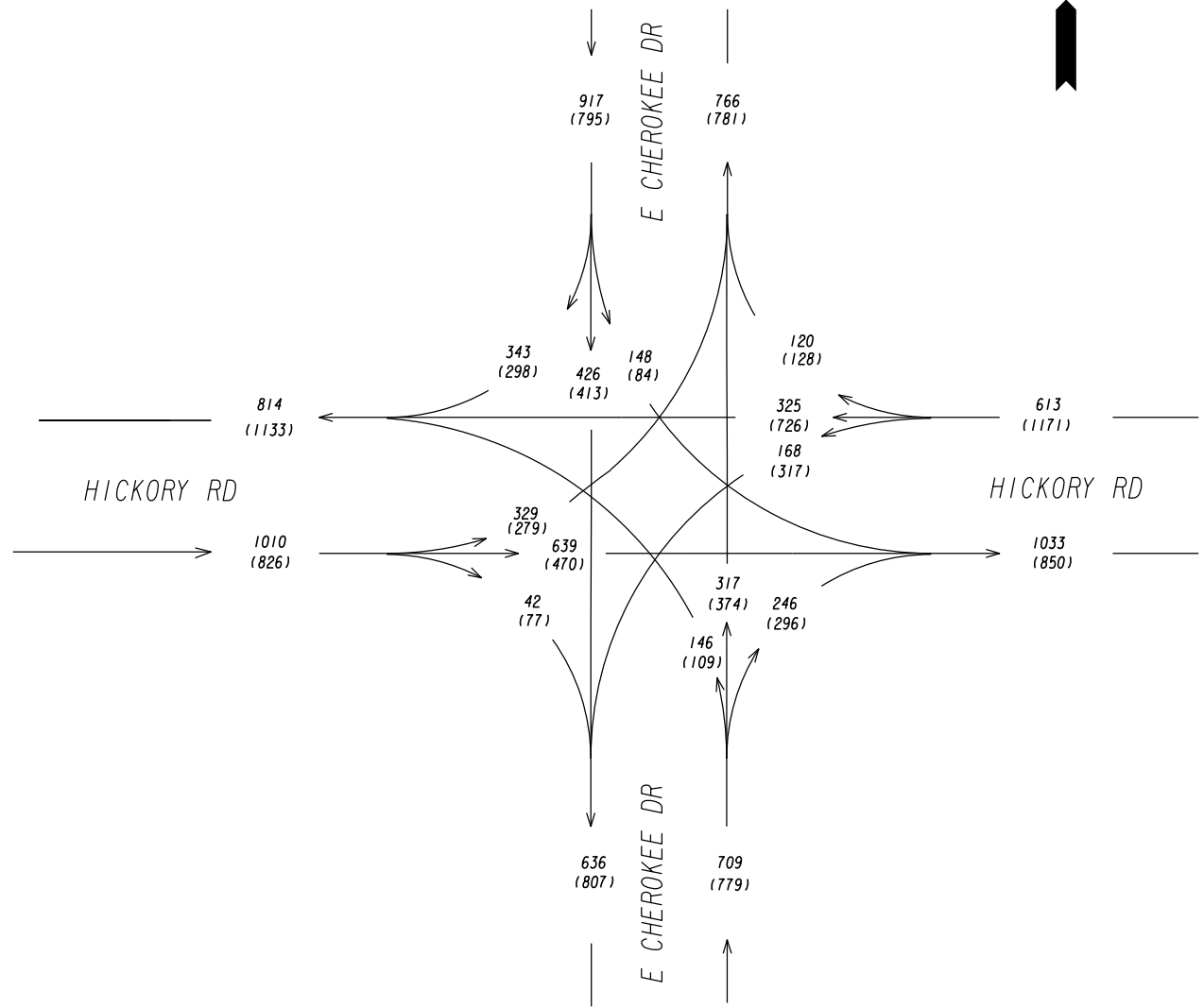
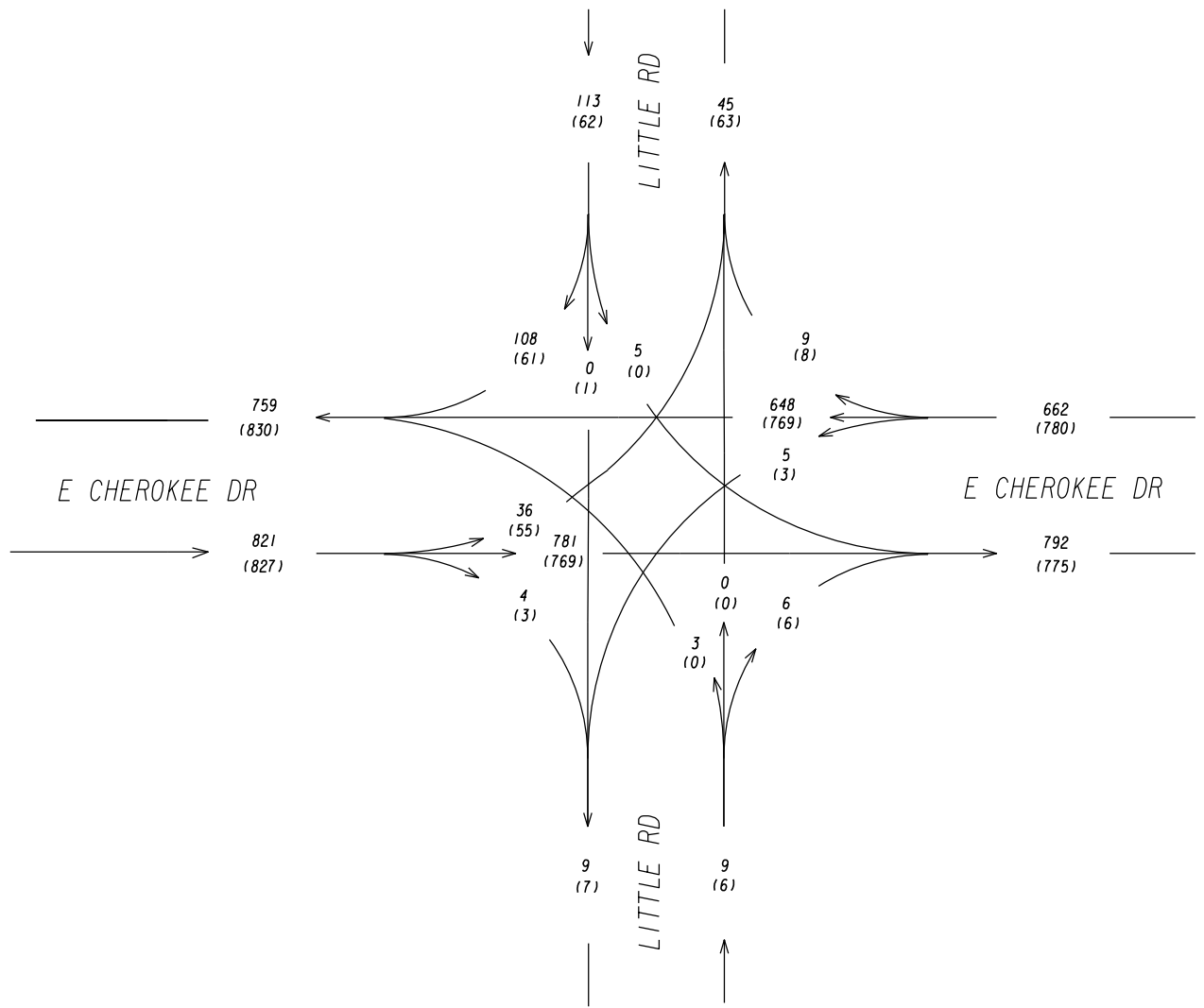
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ NEWCASTLE WALK
E. CHEROKEE DR @ BRADSHAW CLUB DR

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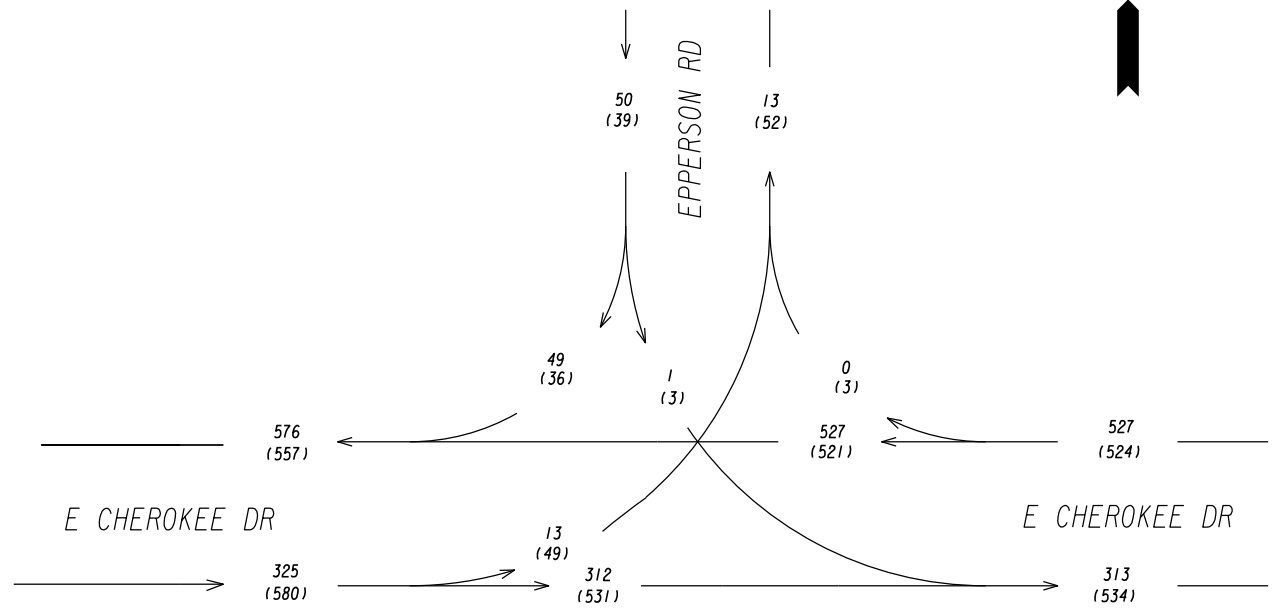
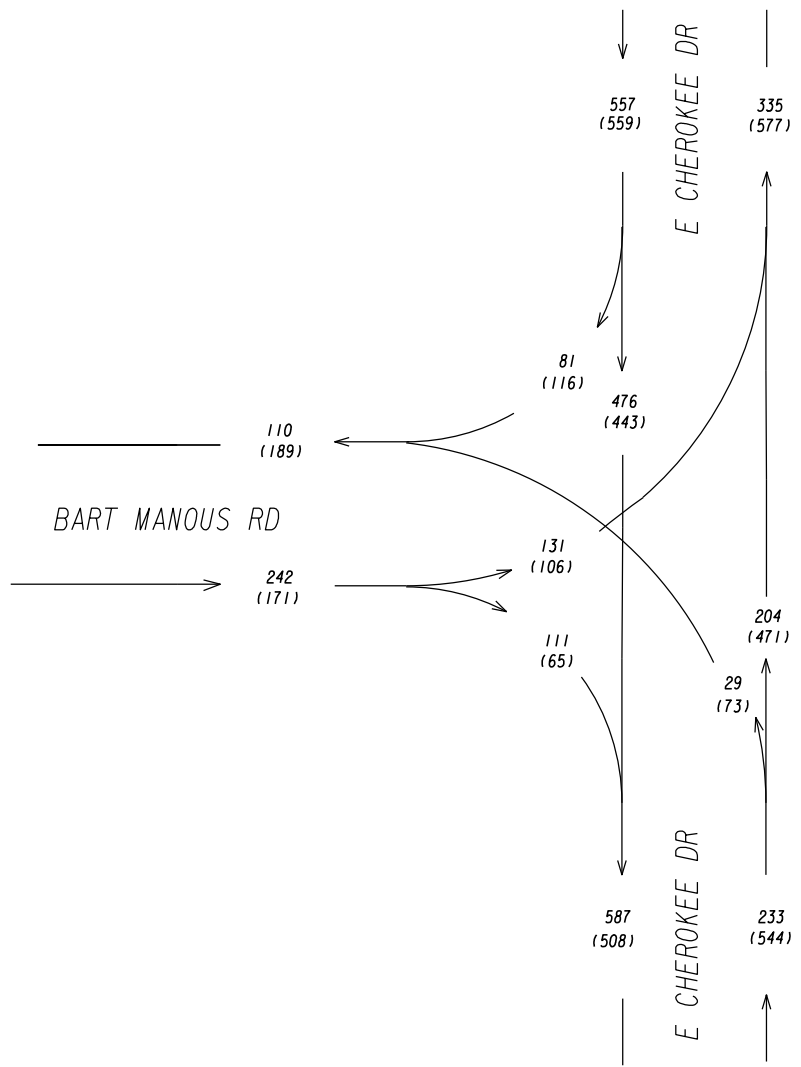
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ LITTLE RD
E. CHEROKEE DR @ HICKORY RD

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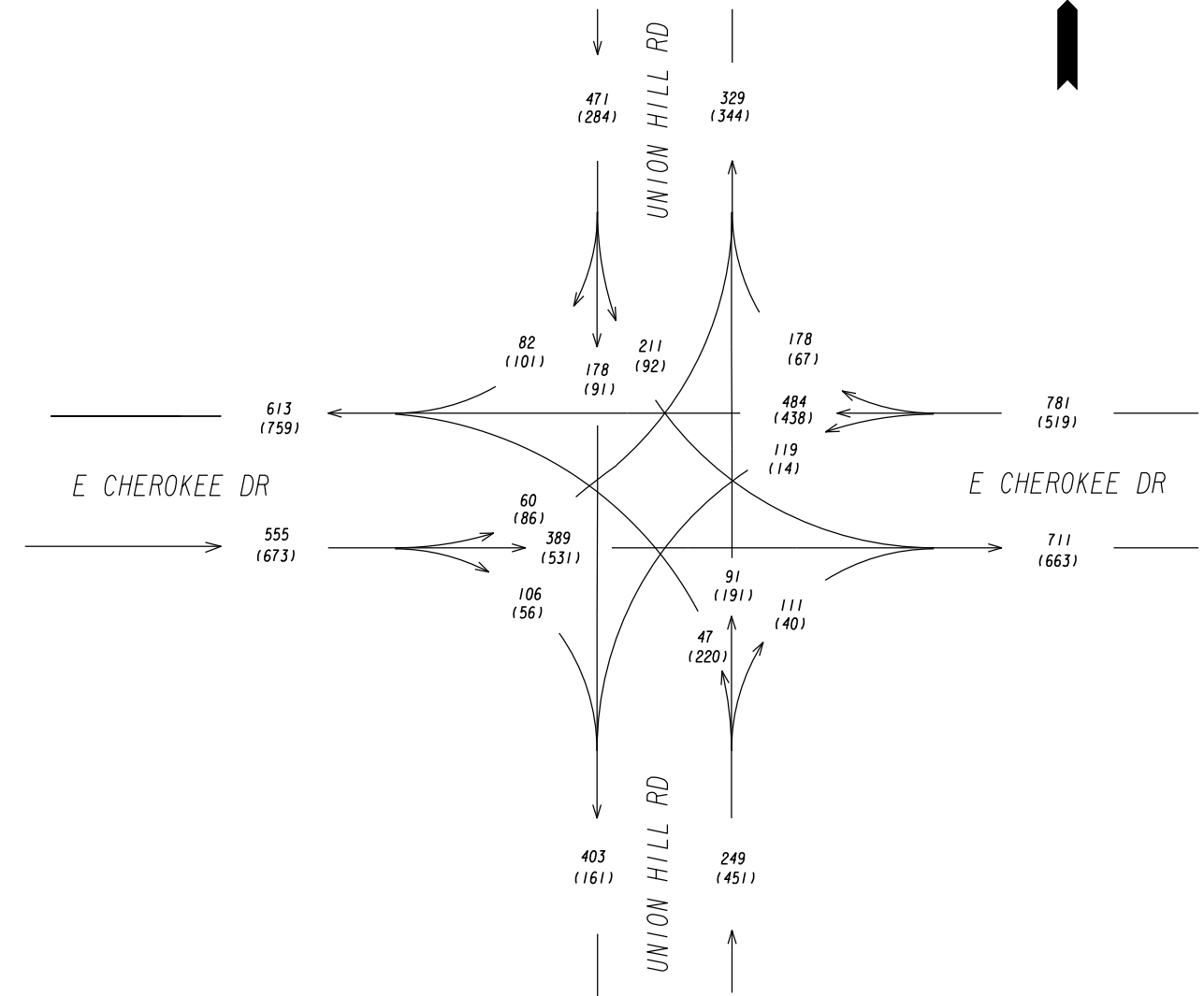
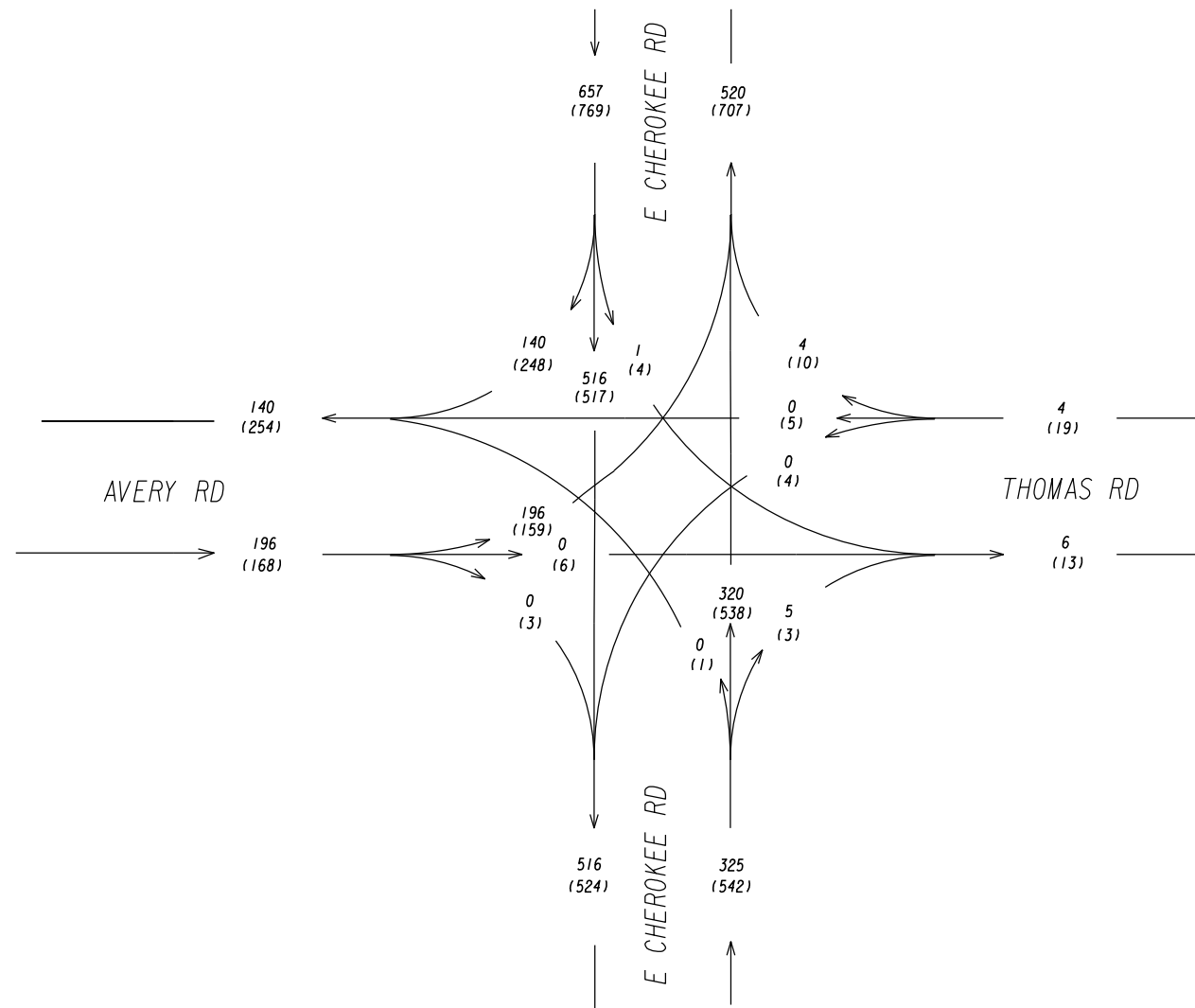
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ BART MANOUS RD
E. CHEROKEE DR @ EPPERSON RD

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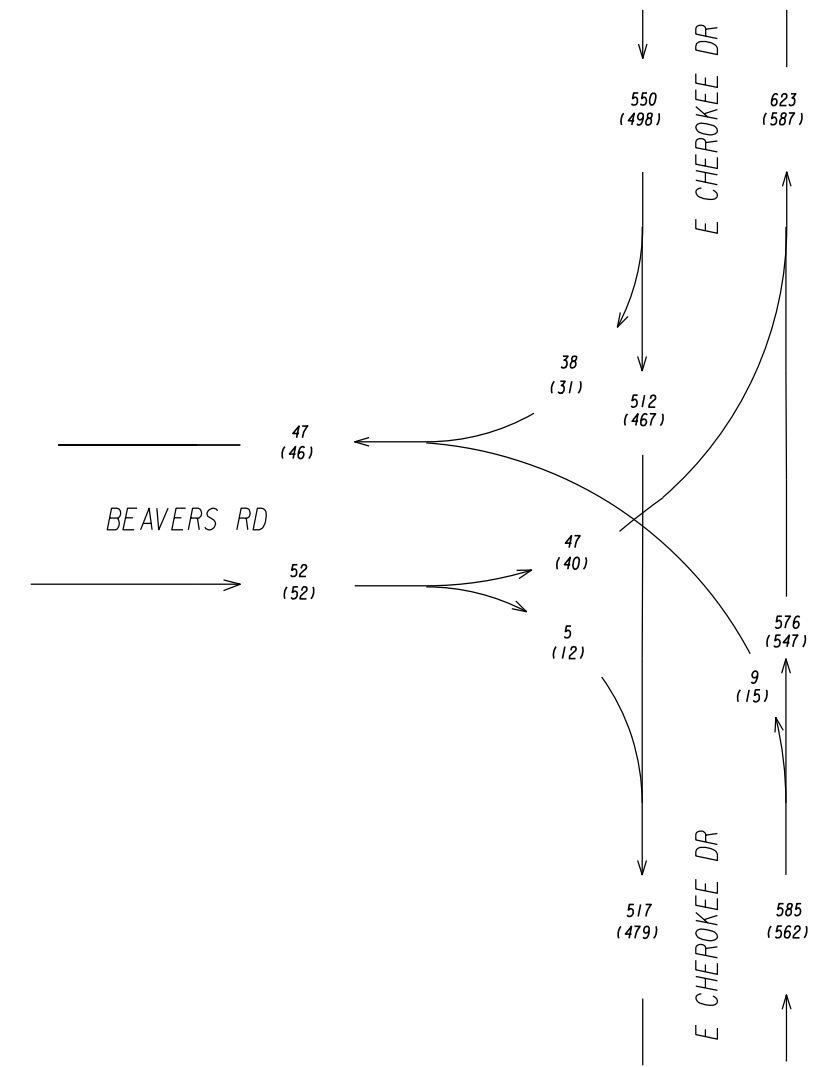
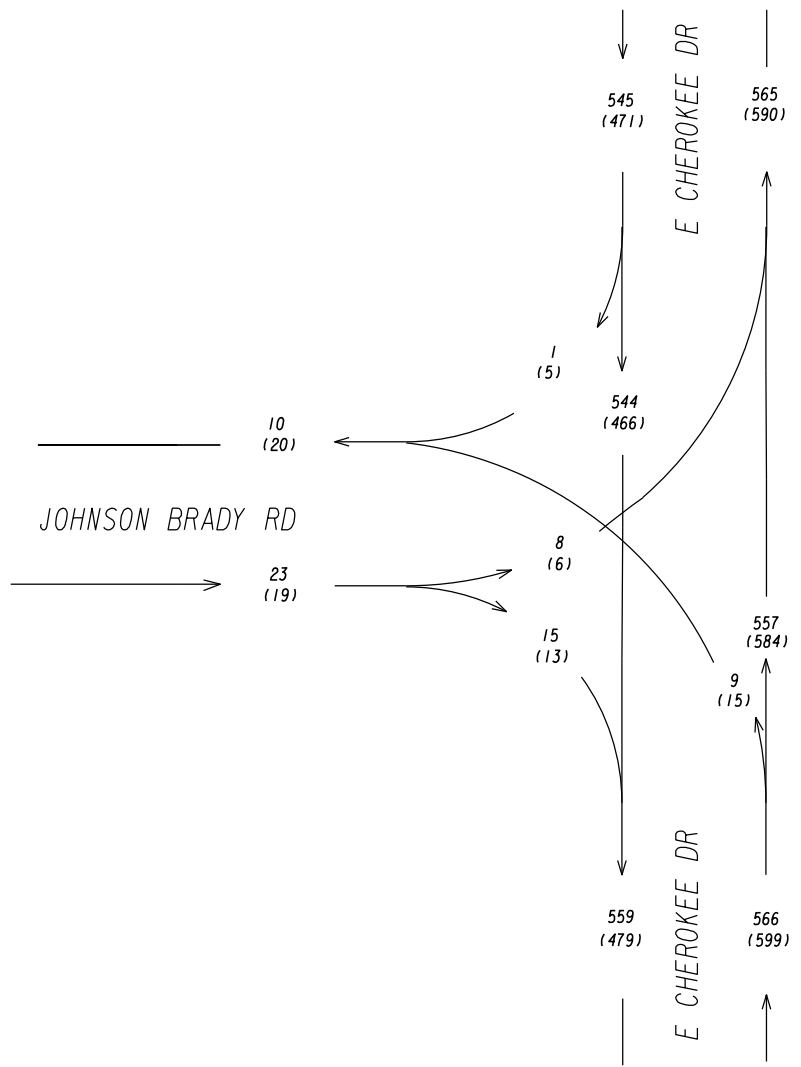
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ AVERY RD
E. CHEROKEE DR @ UNION HILL

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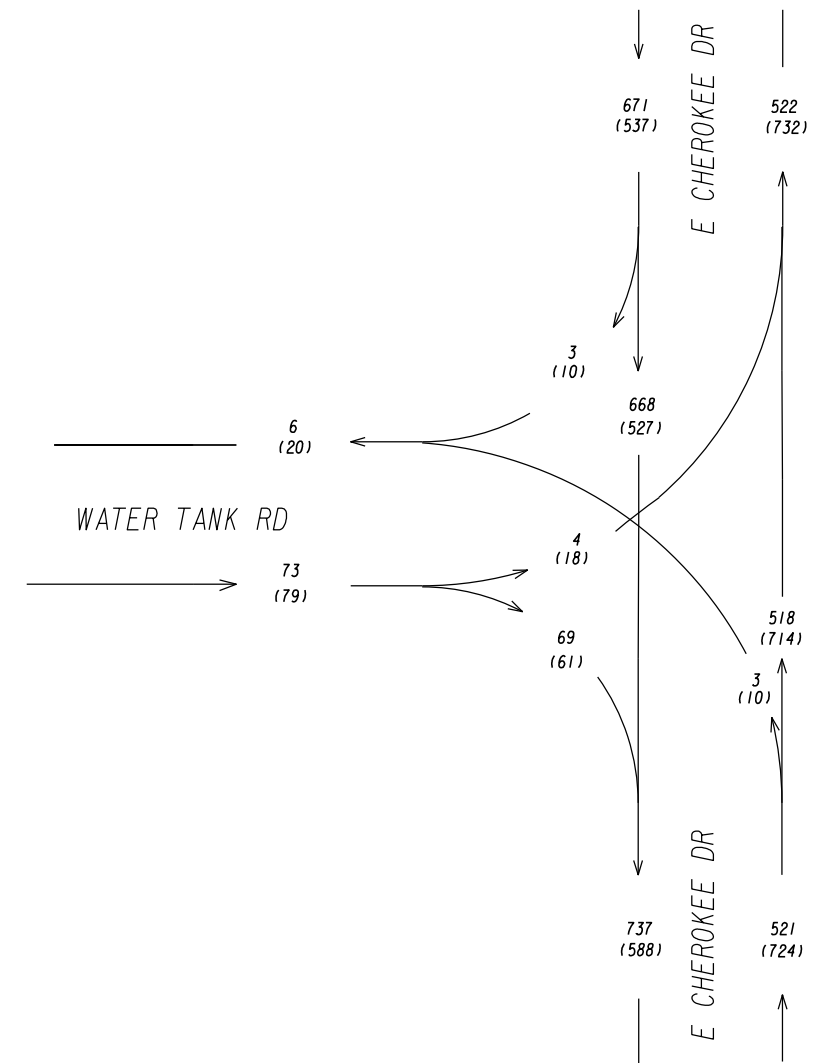
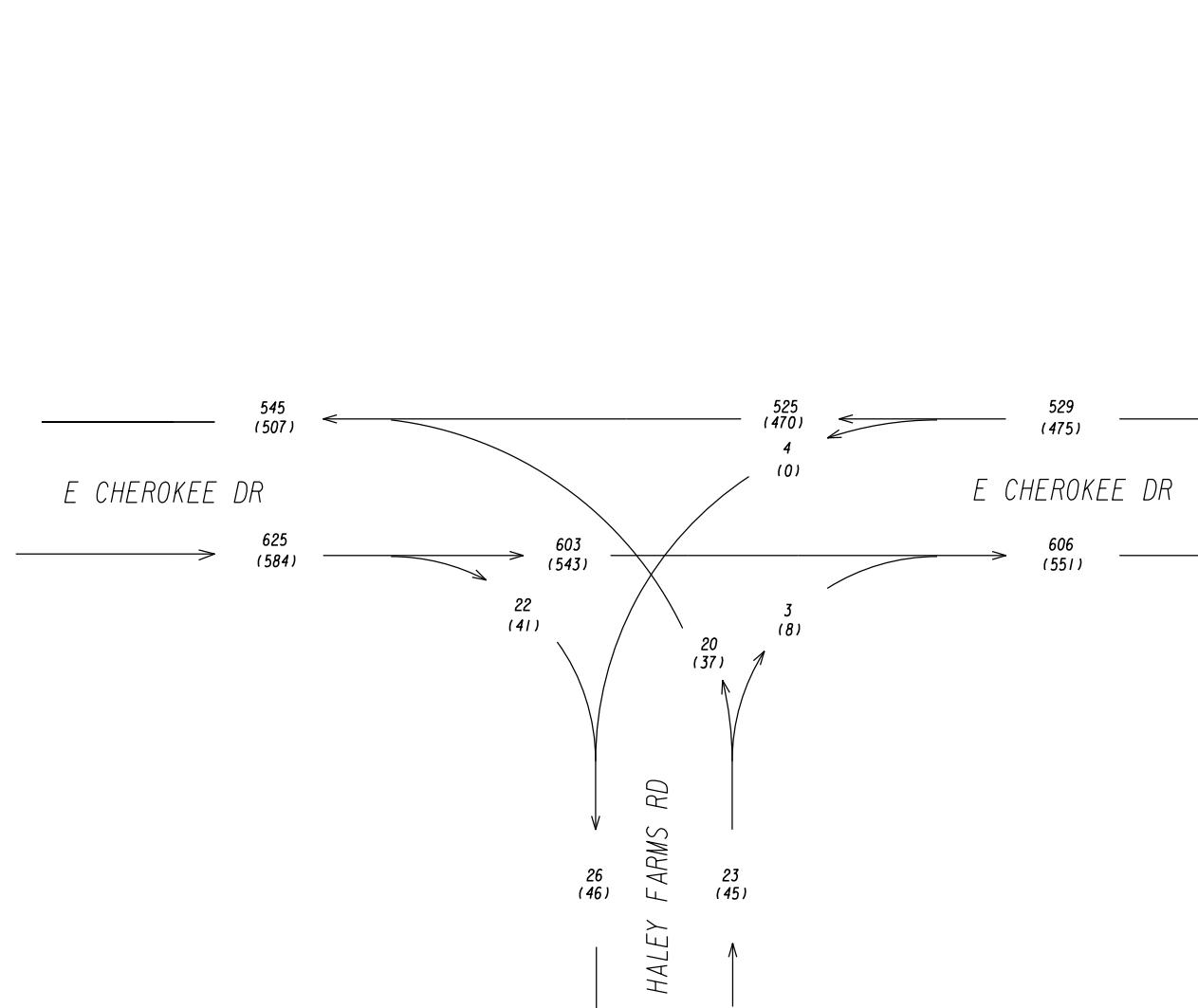
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ JOHNSON BRADY RD
E. CHEROKEE DR @ BEAVERS RD

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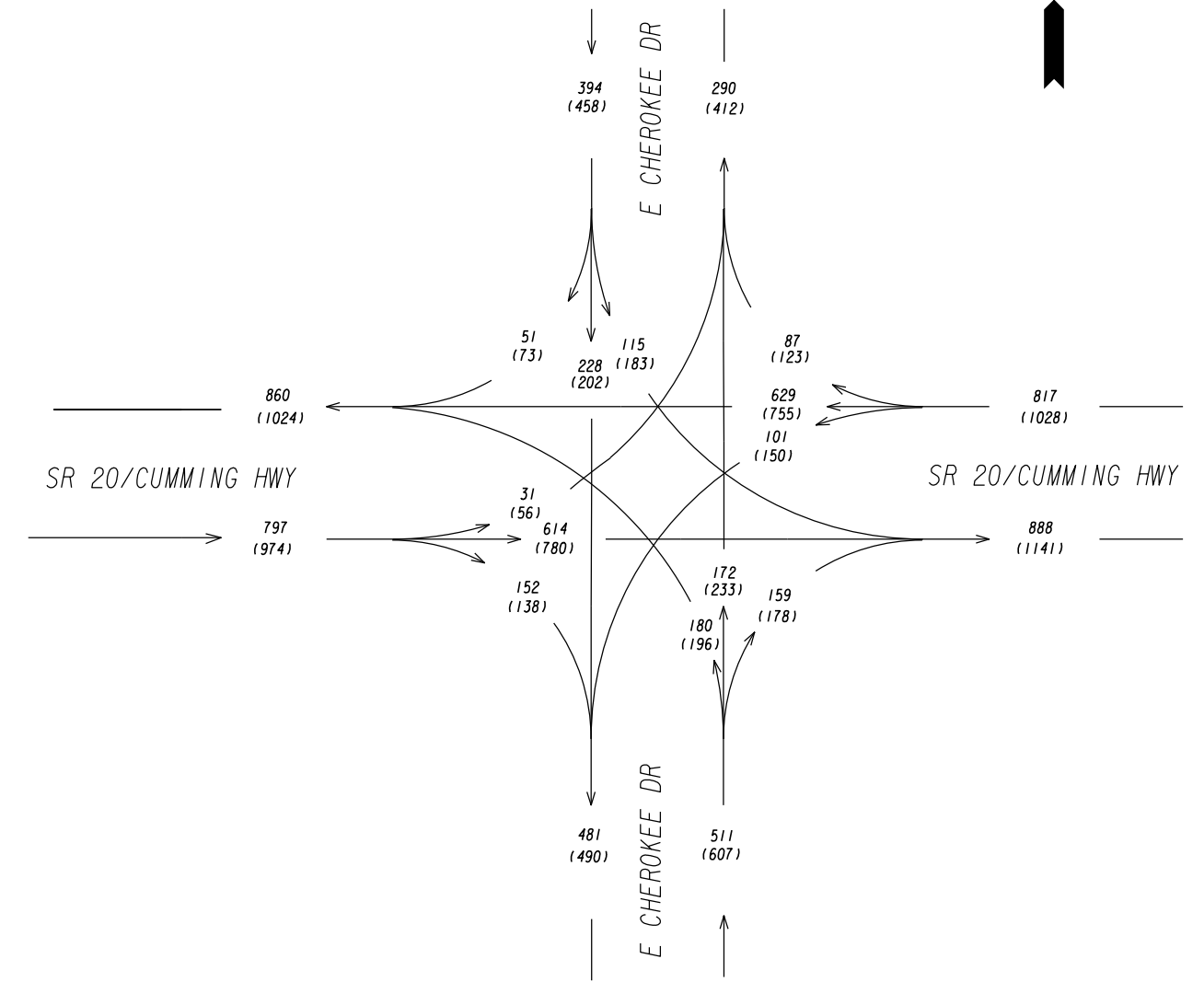
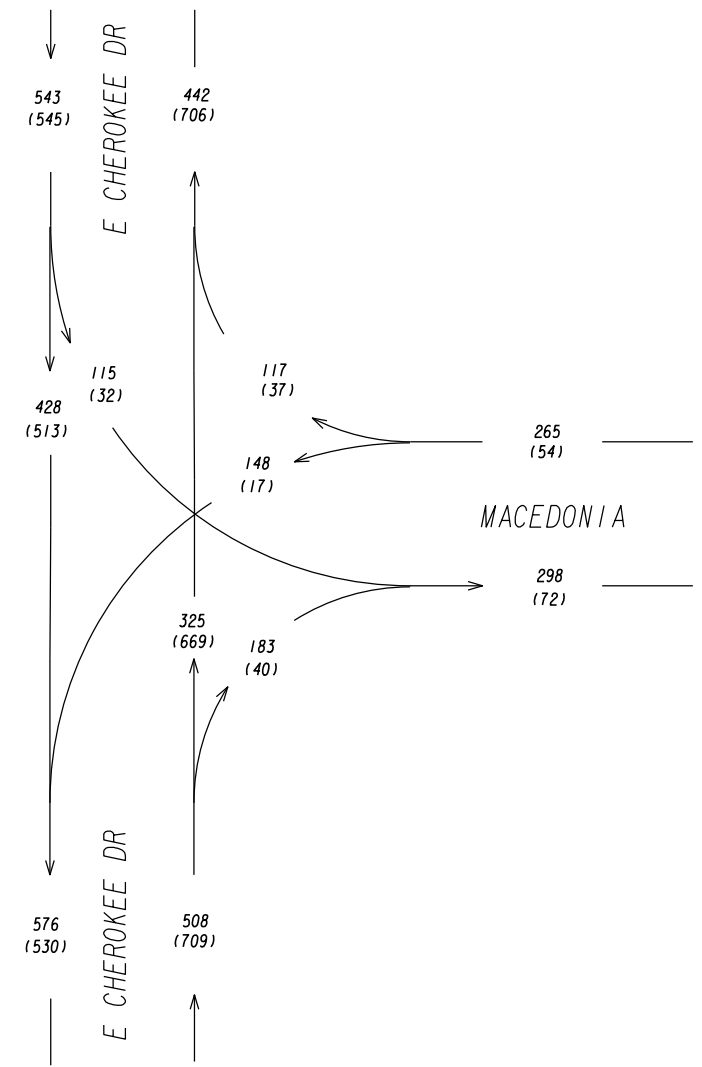
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ HALEY FARMS RD
E. CHEROKEE DR @ WATER TANK RD

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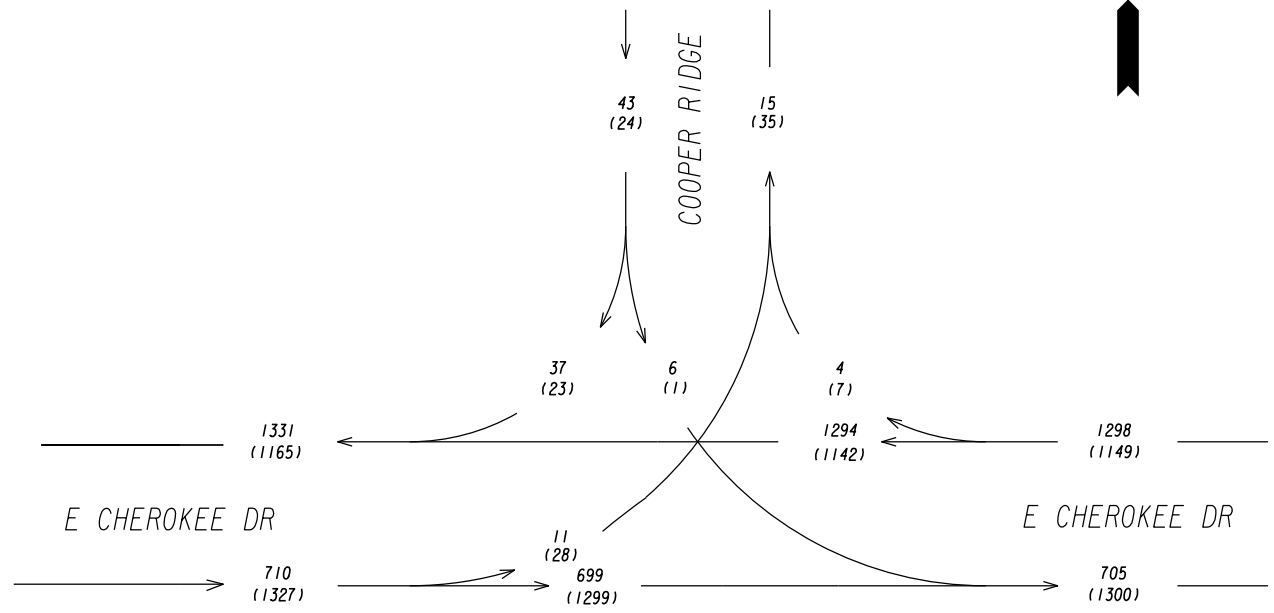
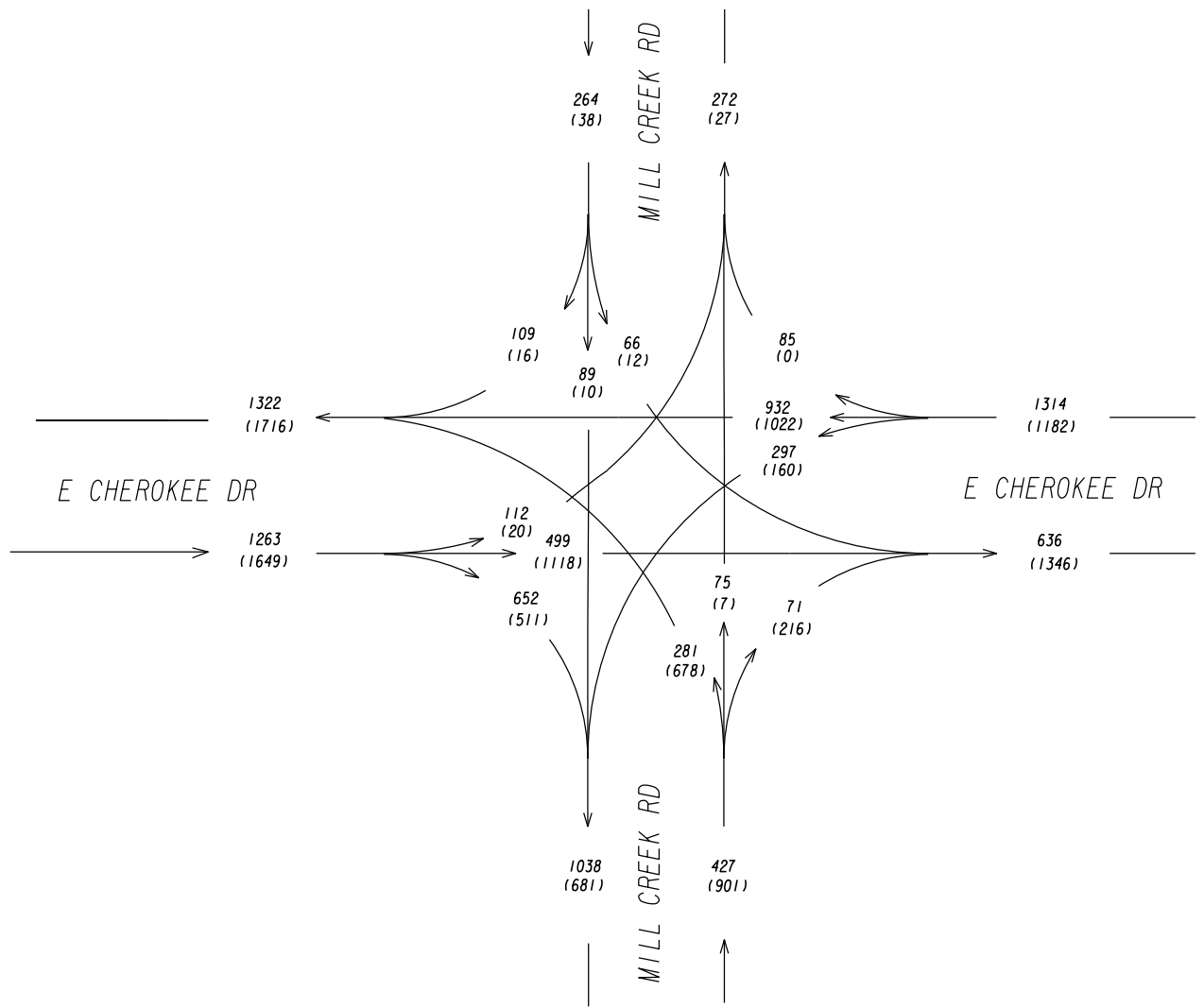
2029 DHV
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ MACEDONIA
E. CHEROKEE DR @ SR 20/ CUMMING HWY

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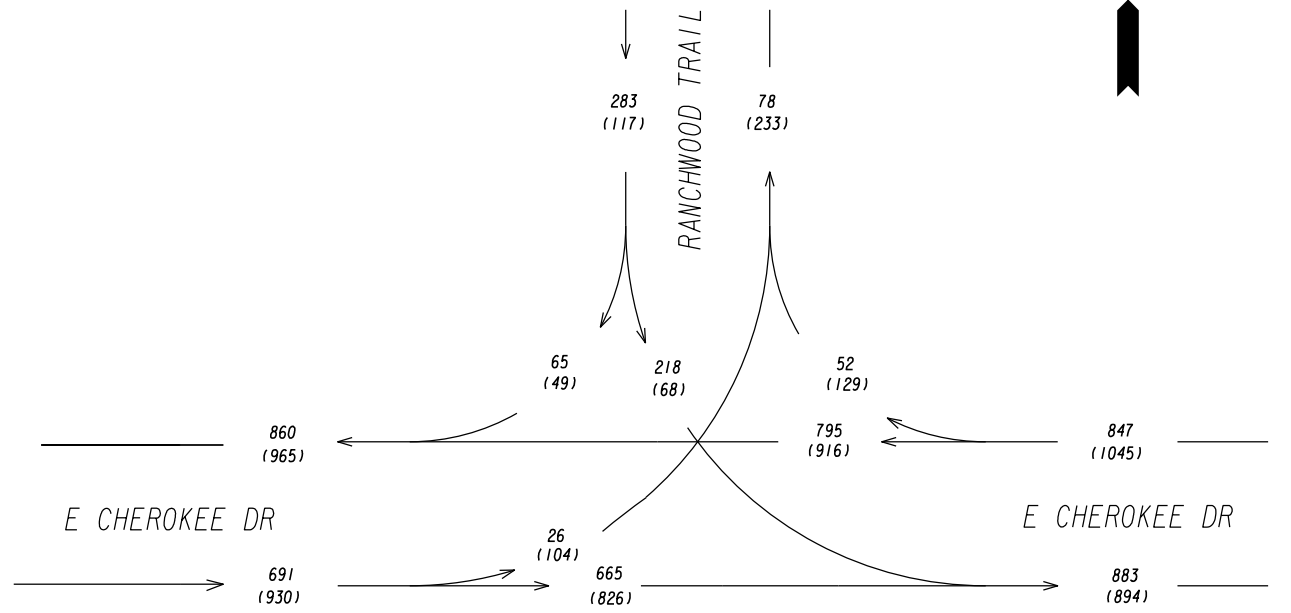
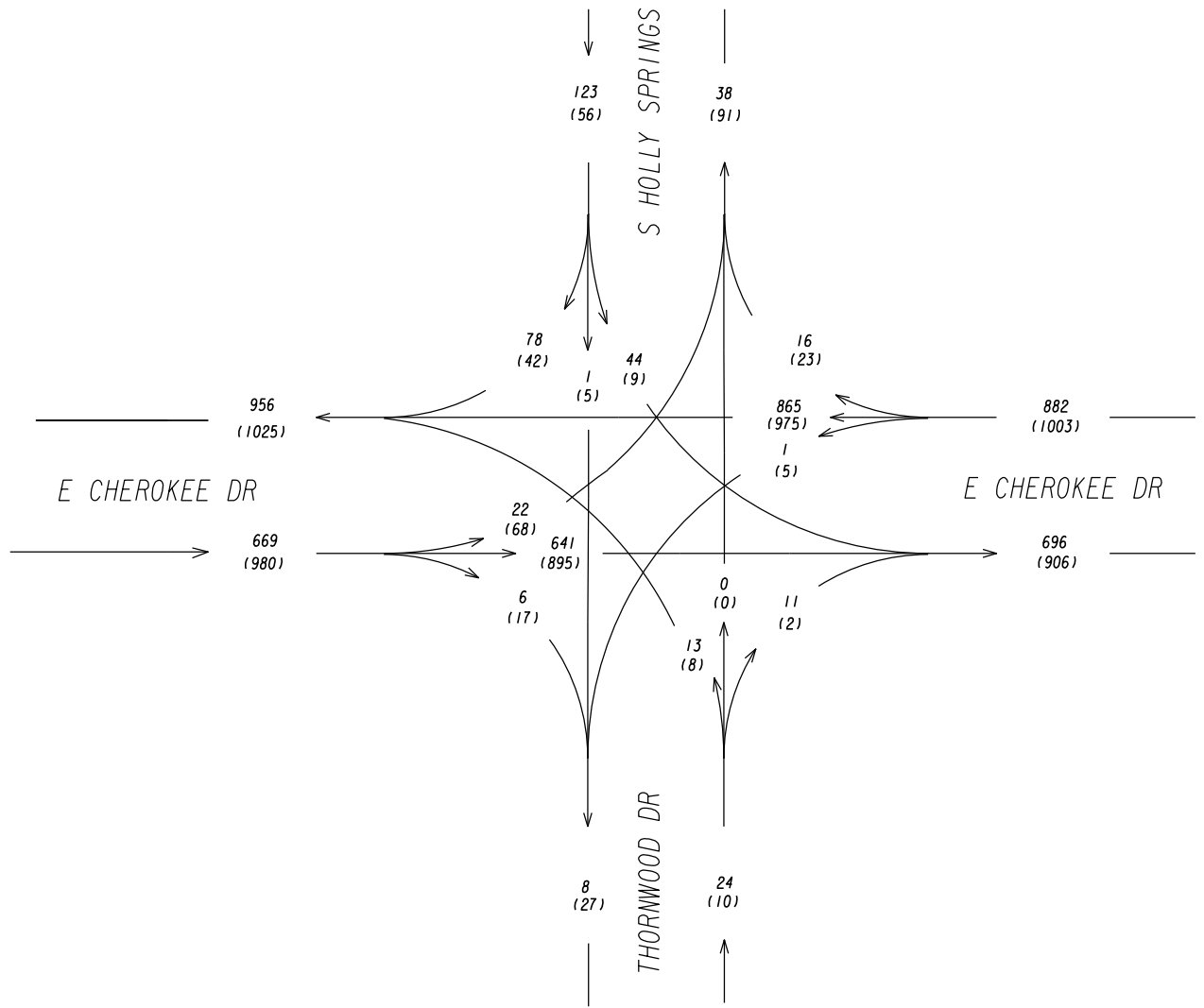
2039 DHV
AM (PM)

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TRAFFIC DIAGRAM
E CHEROKEE DR @ MILL CREEK RD
E CHEROKEE DR @ COOPER RIDGE DR

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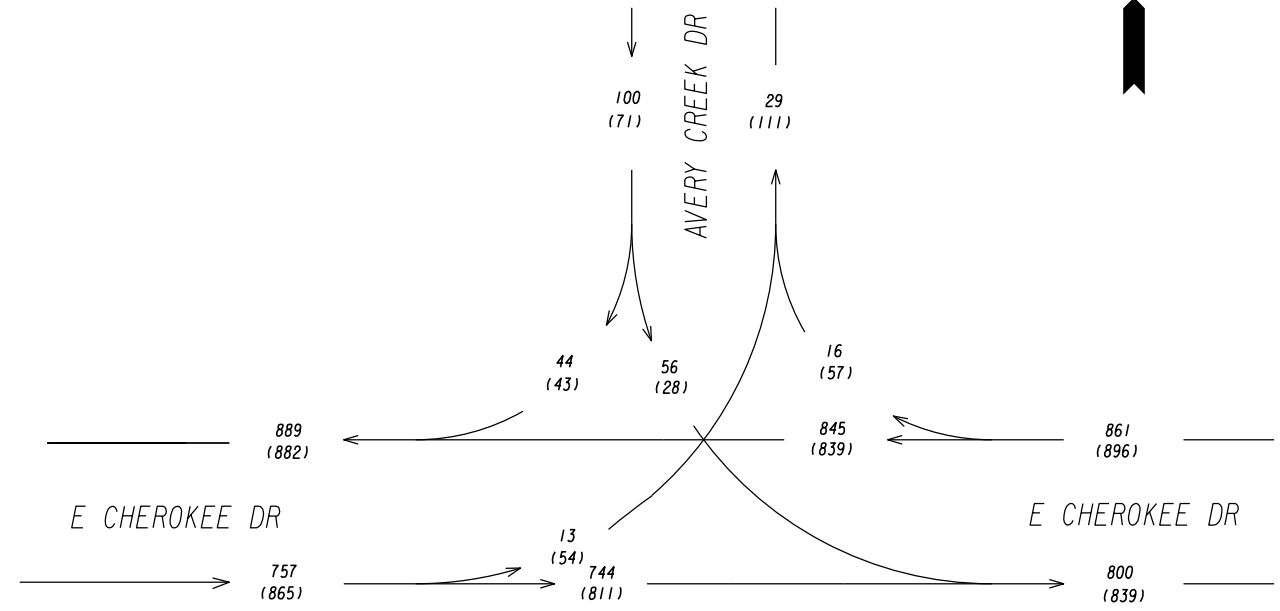
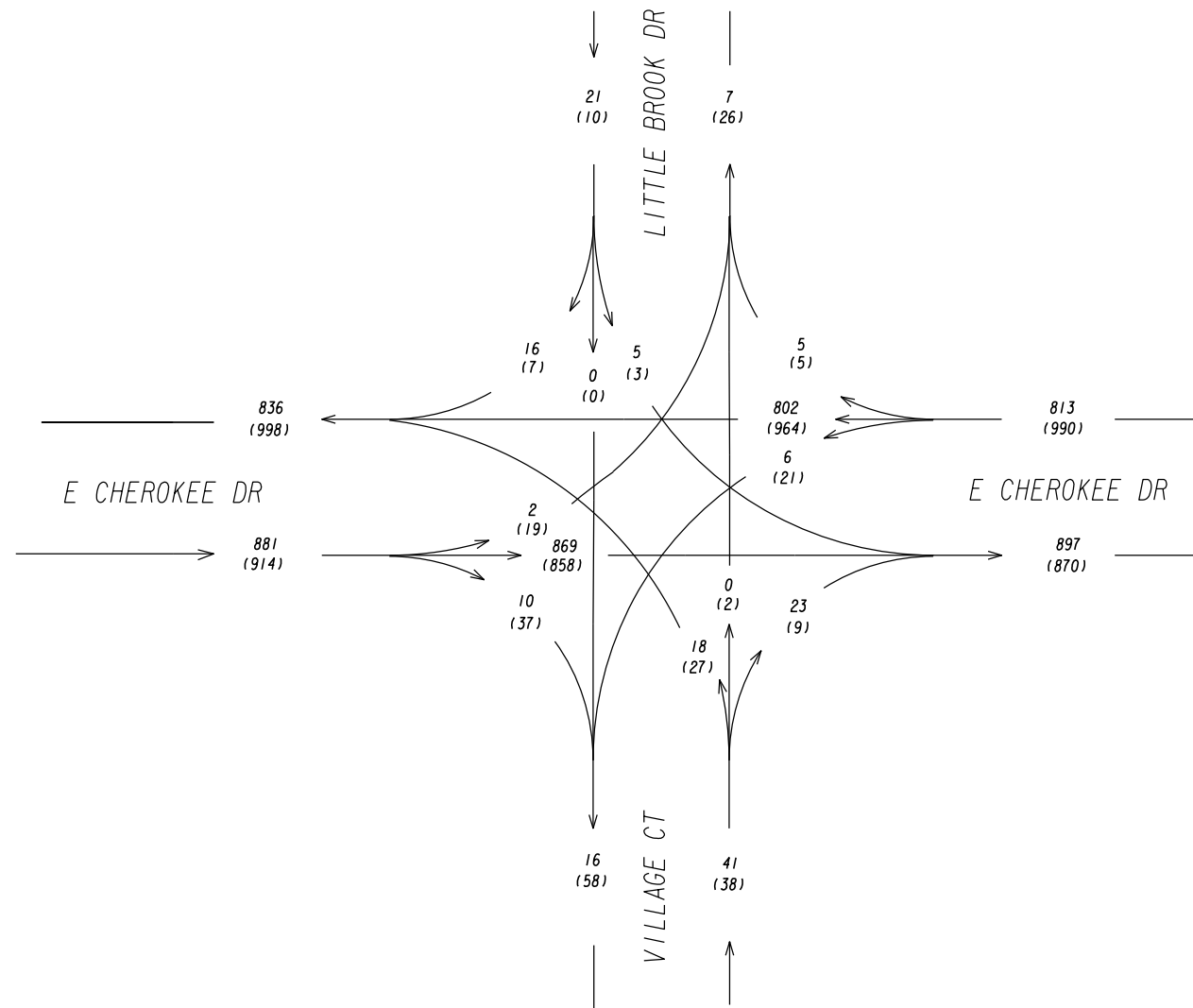
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TRAFFIC DIAGRAM
E CHEROKEE DR @ HOLLY SPRINGS/
THORWOOD DR
E CHEROKEE DR @ RANCHWOOD TRAIL

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2039 DHV
AM (PM)

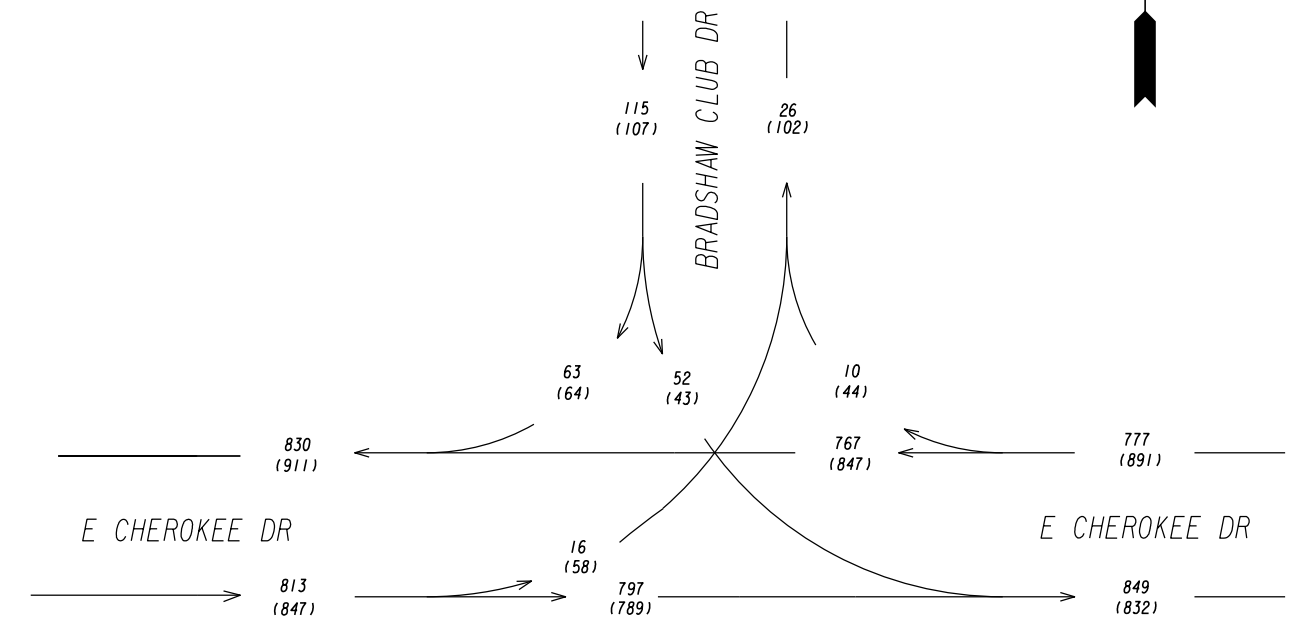
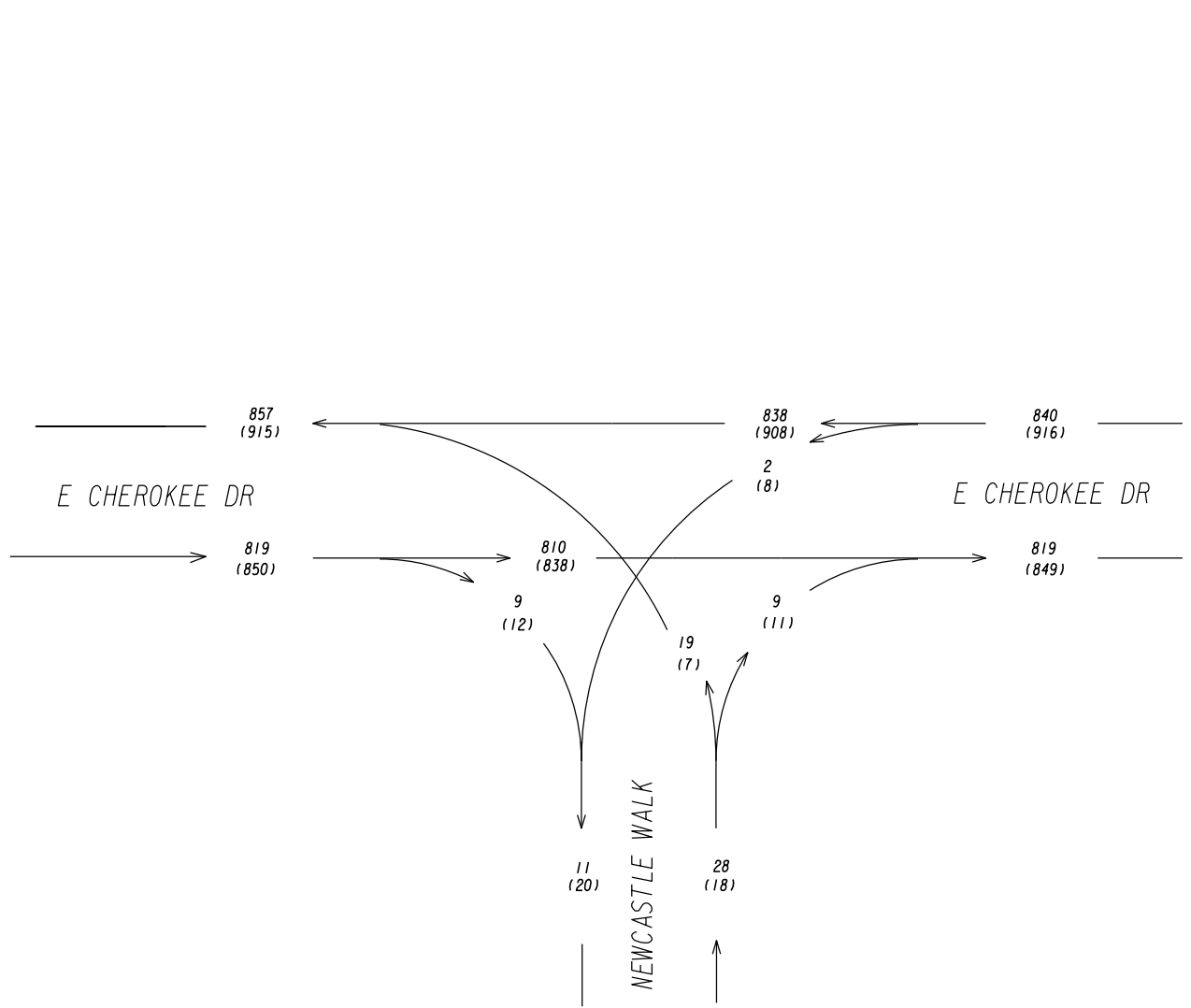
NOT TO SCALE

REVISION DATES

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TRAFFIC DIAGRAM
E CHEROKEE DR @ LITTLE BROOK DR/
VILLAGE CT
E CHEROKEE DR @ AVERY CREEK DR

| | | |
|--------------|-------|-------------|
| CHECKED: | DATE: | DRAWING No. |
| BACKCHECKED: | DATE: | 10-0023 |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |



2039 DHV
AM (PM)

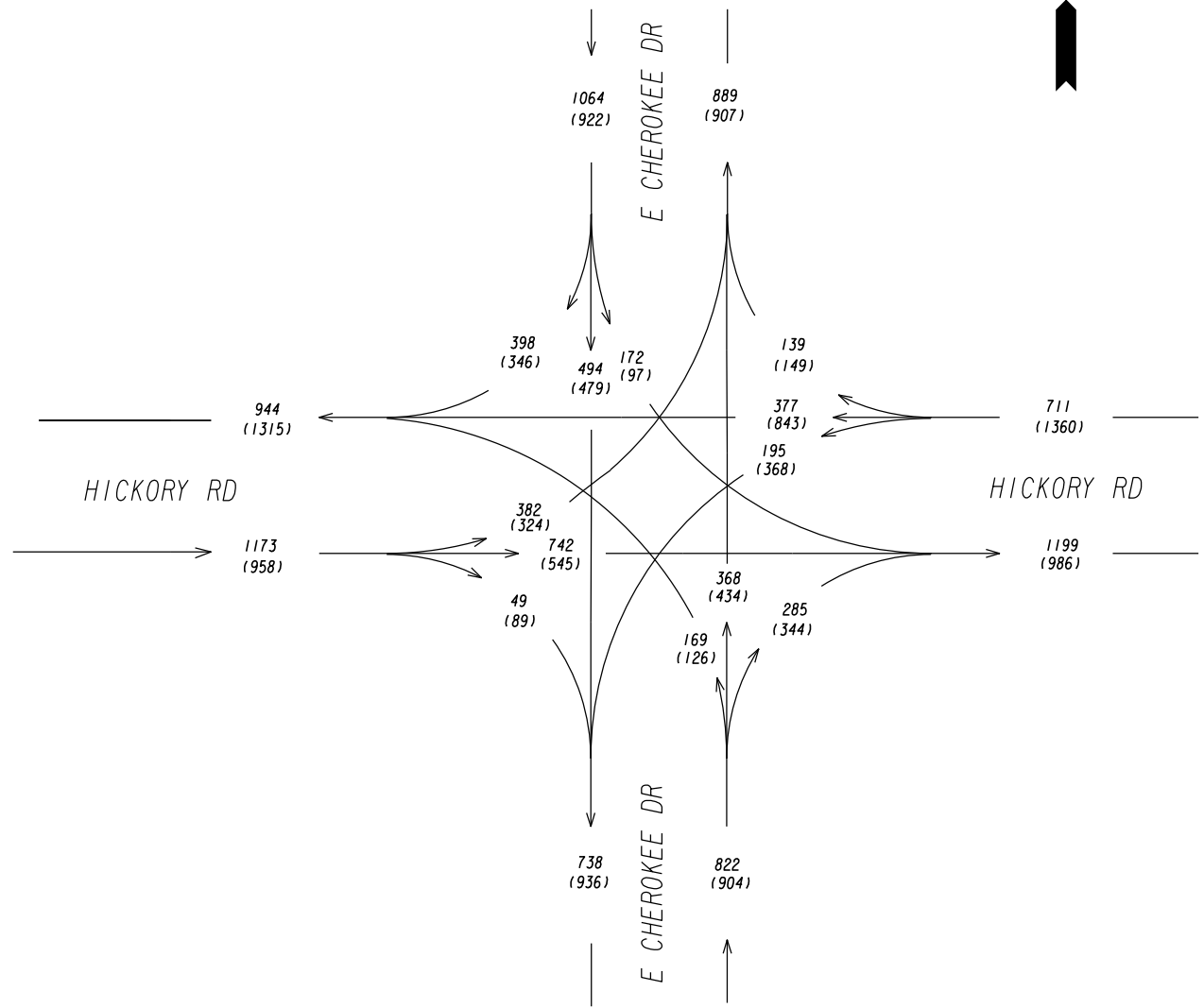
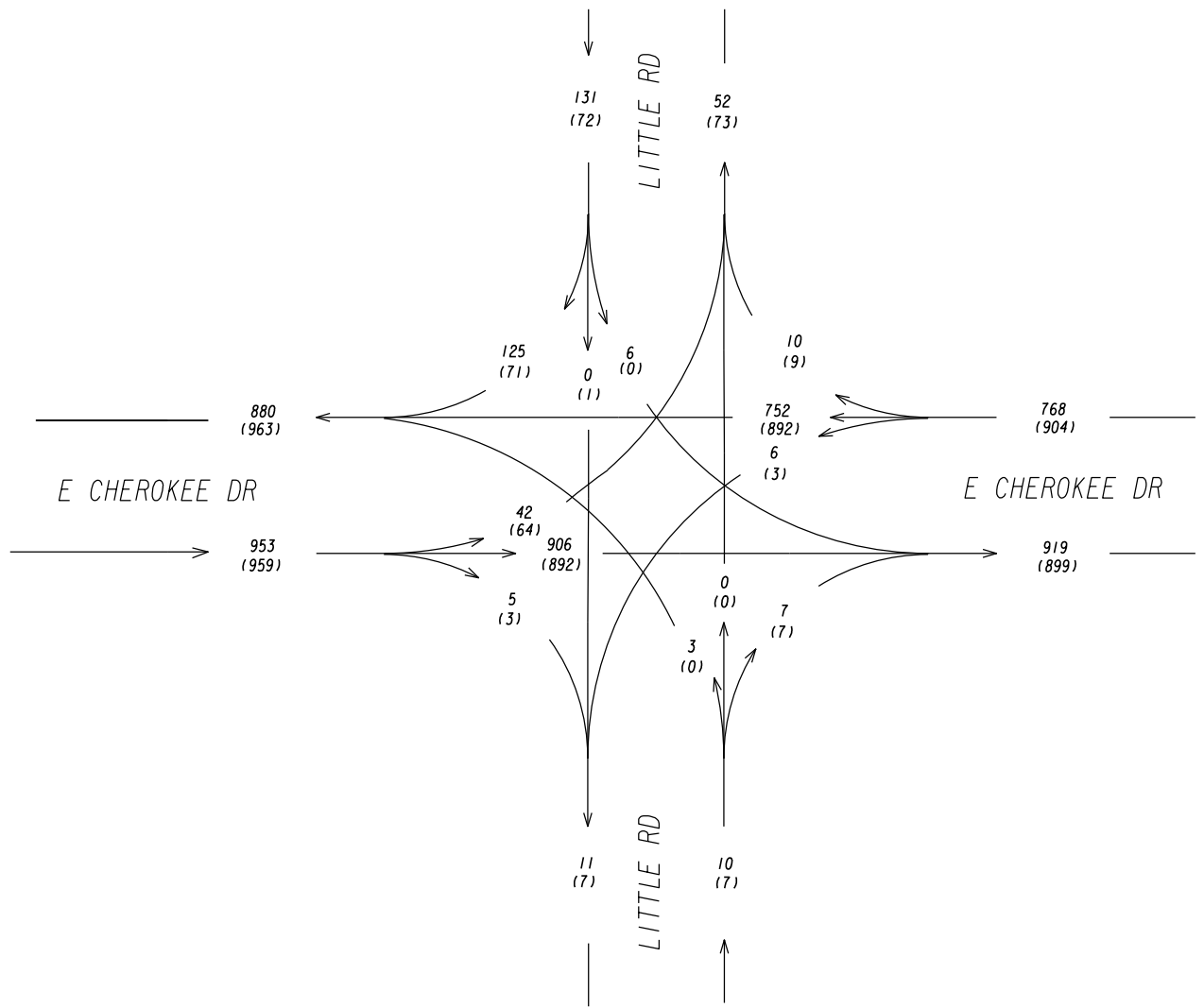
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REVISION DATES

| No. | Date | Description |
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ NEWCASTLE WALK
E. CHEROKEE DR @ BRADSHAW CLUB DR

| CHECKED: | DATE: | DRAWING No. |
|--------------|-------|-------------|
| | | 10-0024 |
| BACKCHECKED: | DATE: | |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |



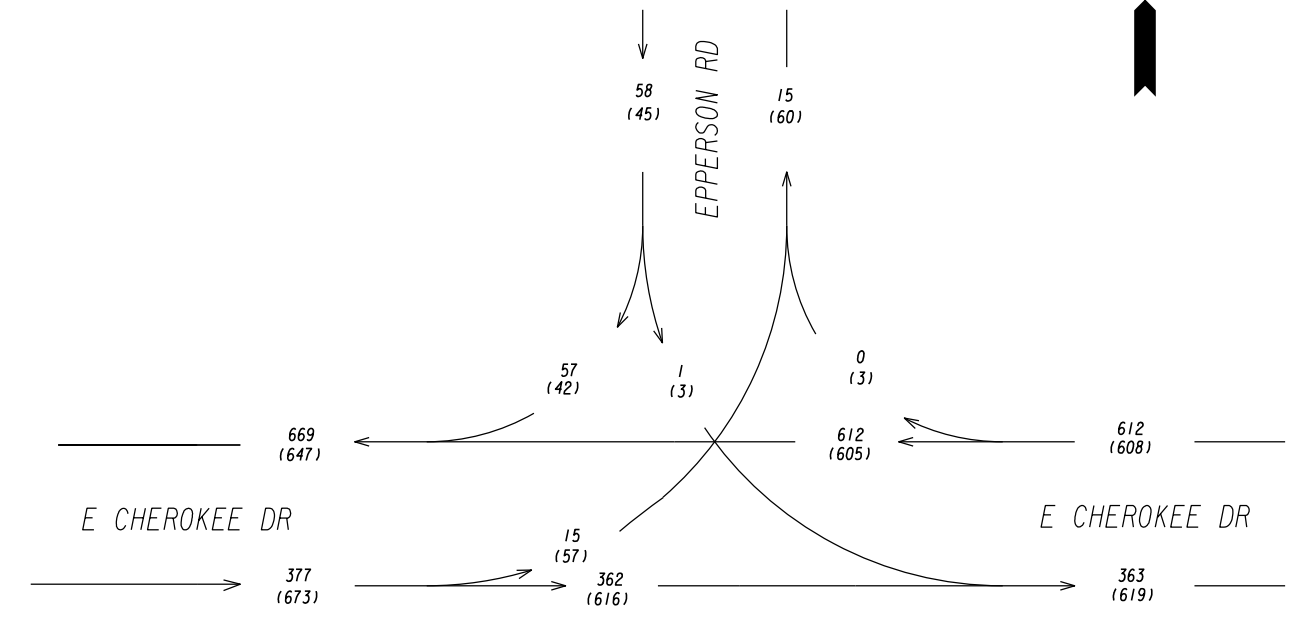
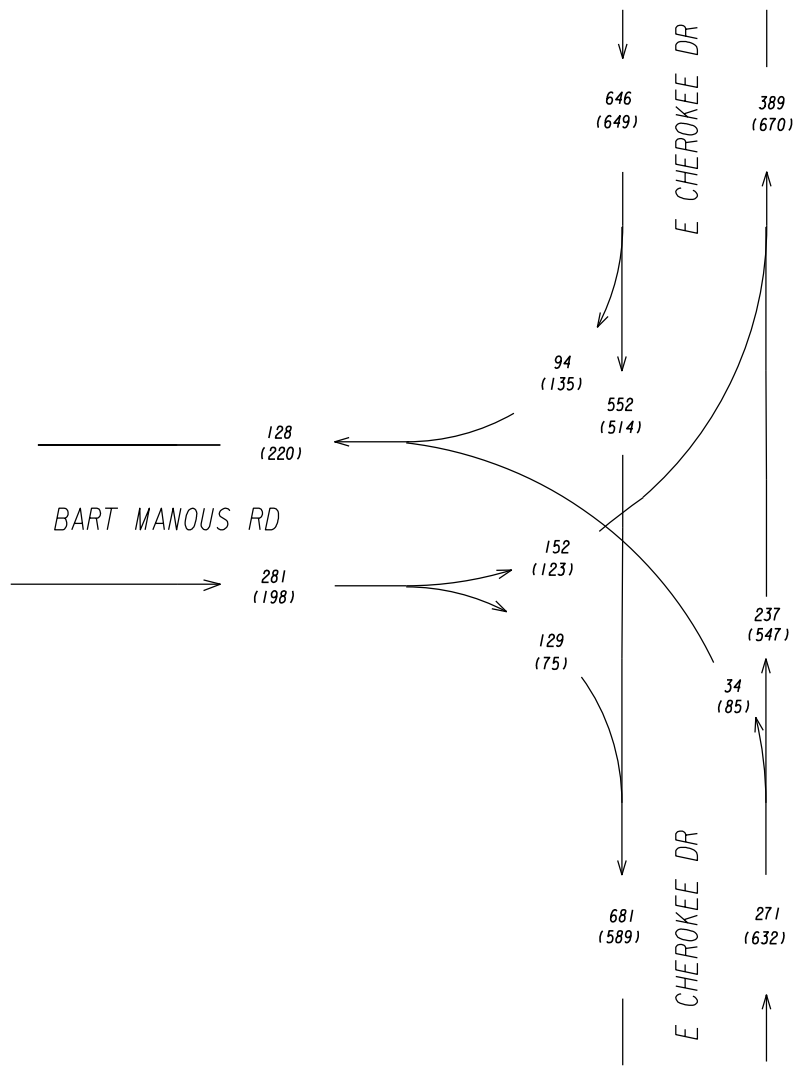
2039 DHV
AM (PM)

NOT TO SCALE

| REVISION DATES | | |
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**TRAFFIC DIAGRAM
E. CHEROKEE DR @ LITTLE RD
E. CHEROKEE DR @ HICKORY RD**

| | | |
|--------------|-------|-------------|
| CHECKED: | DATE: | DRAWING No. |
| BACKCHECKED: | DATE: | 10-0025 |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |



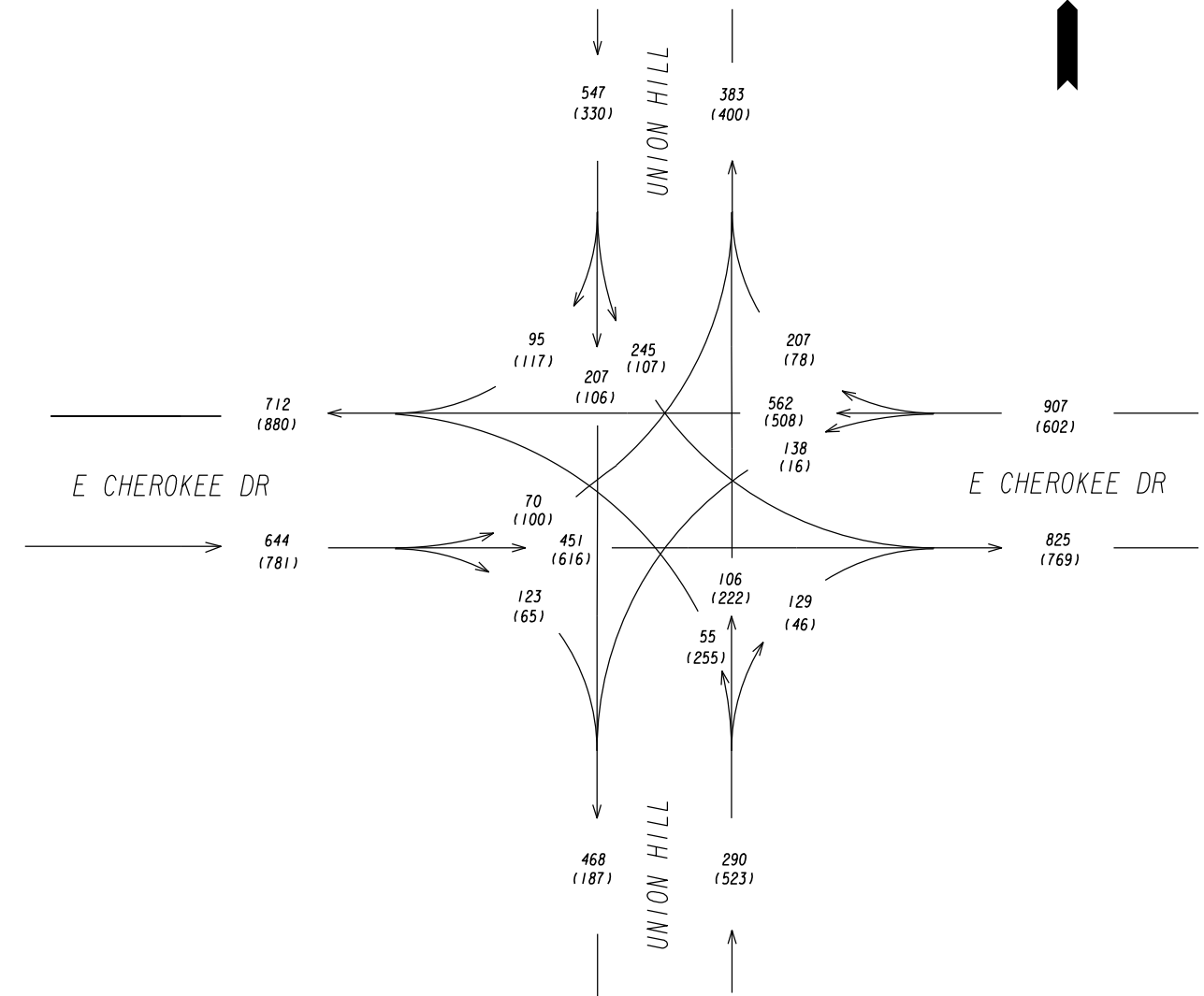
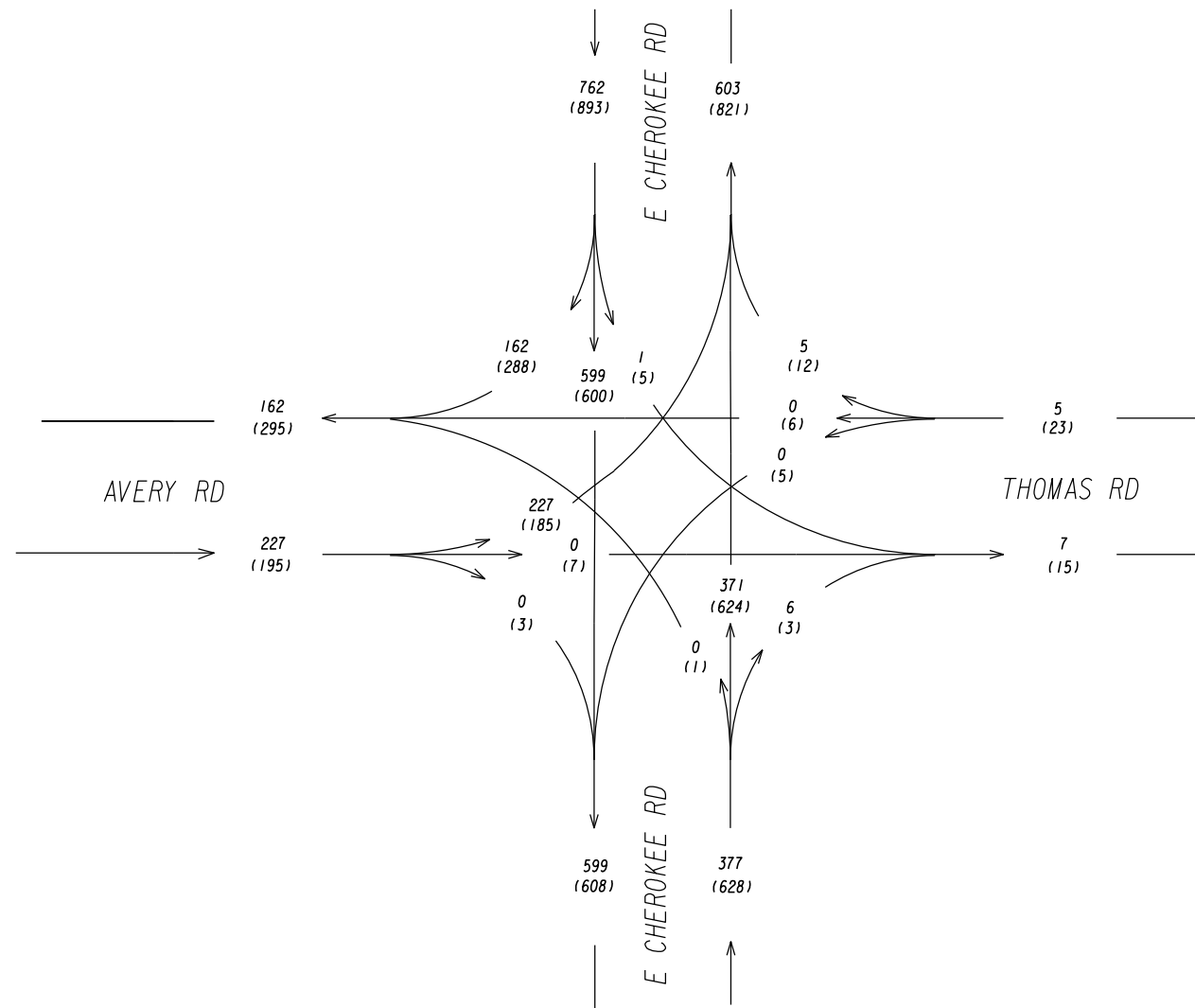
2039 DHV
AM (PM)

NOT TO SCALE

| REVISION DATES | | |
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ BART MANOUS RD
E. CHEROKEE DR @ EPPERSON RD

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| CHECKED: | DATE: | DRAWING No. |
| BACKCHECKED: | DATE: | 10-0026 |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |



2039 DHV
AM (PM)

NOT TO SCALE

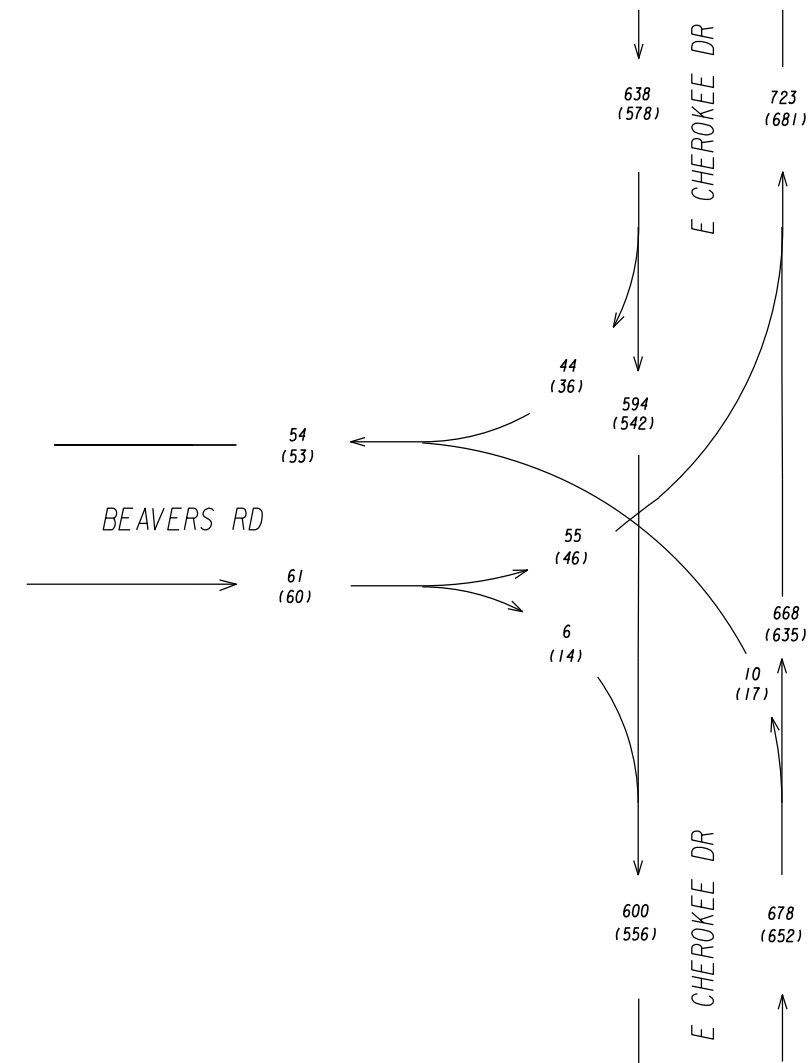
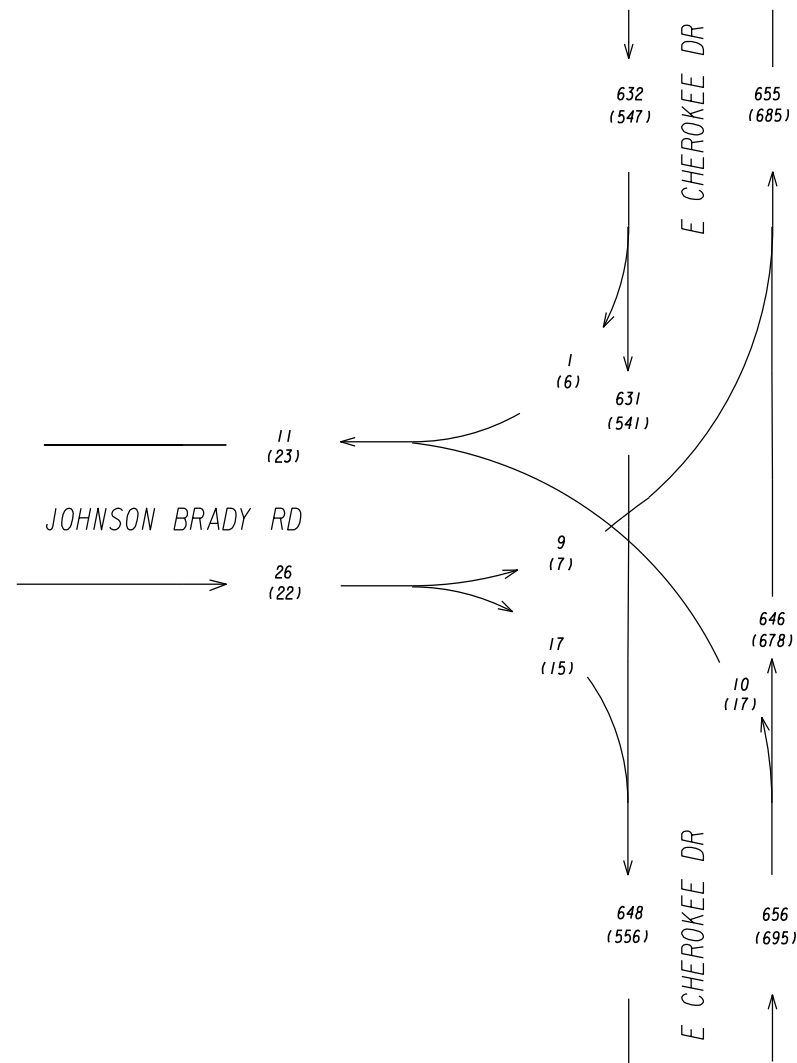
REVISION DATES

| No. | Date | Description |
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ AVERY RD
E. CHEROKEE DR @ UNION HILL

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| CHECKED: | DATE: |
| BACKCHECKED: | DATE: |
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DRAWING No.
10-0027



2039 DHV
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NOT TO SCALE

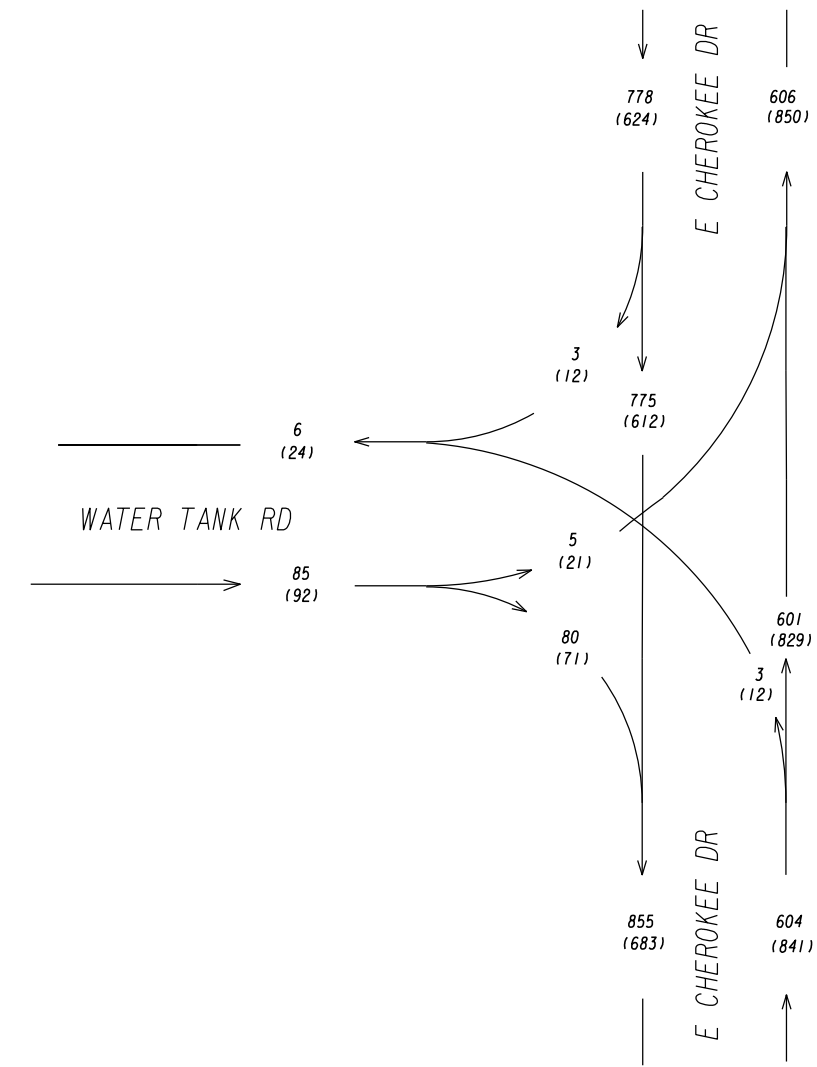
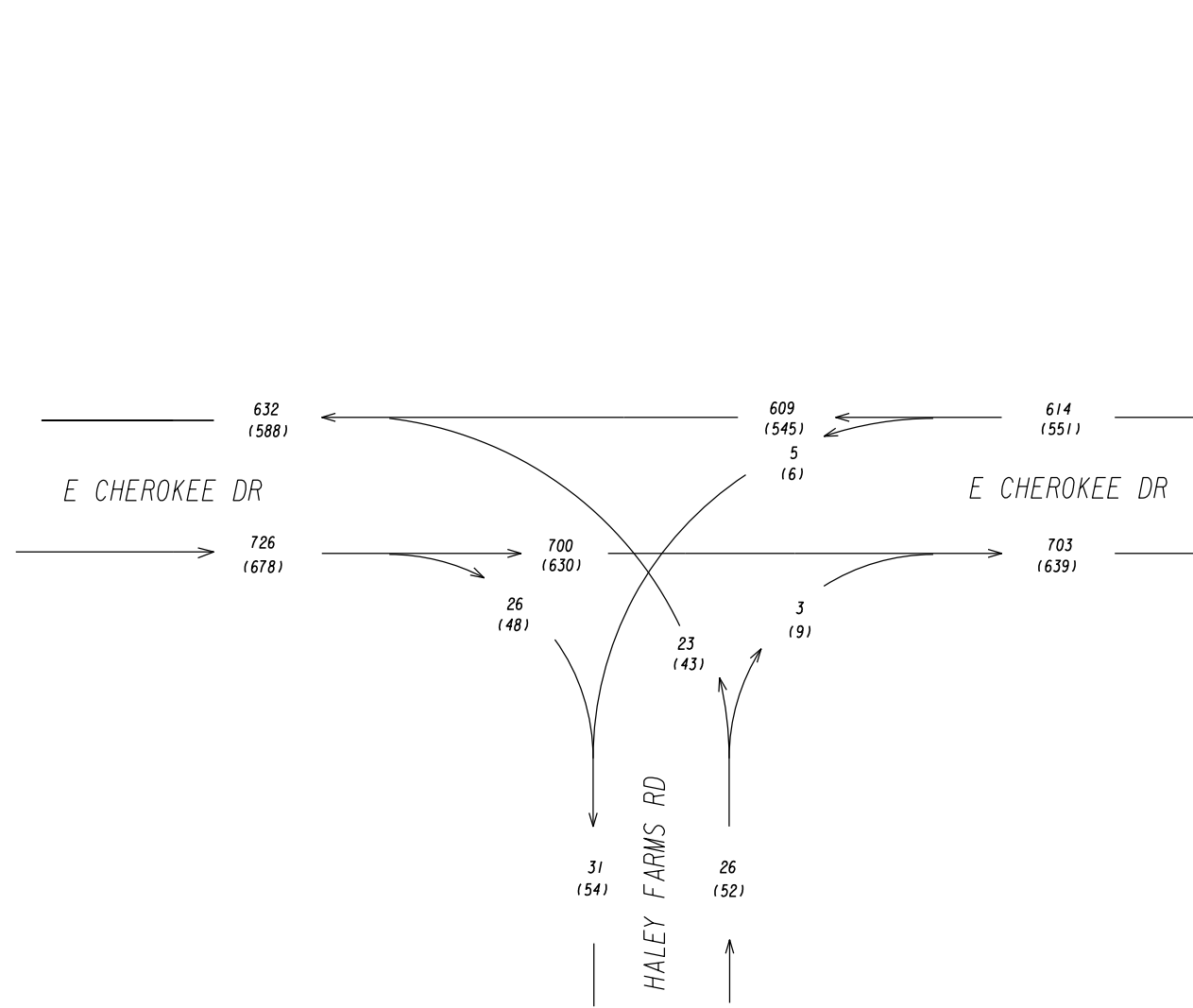
REVISION DATES

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TRAFFIC DIAGRAM
E. CHEROKEE DR @ JOHNSON BRADY RD
E. CHEROKEE DR @ BEAVERS RD

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| CHECKED: | | DATE: | |
| BACKCHECKED: | | DATE: | |
| CORRECTED: | | DATE: | |
| VERIFIED: | | DATE: | |

DRAWING No.
10-0028



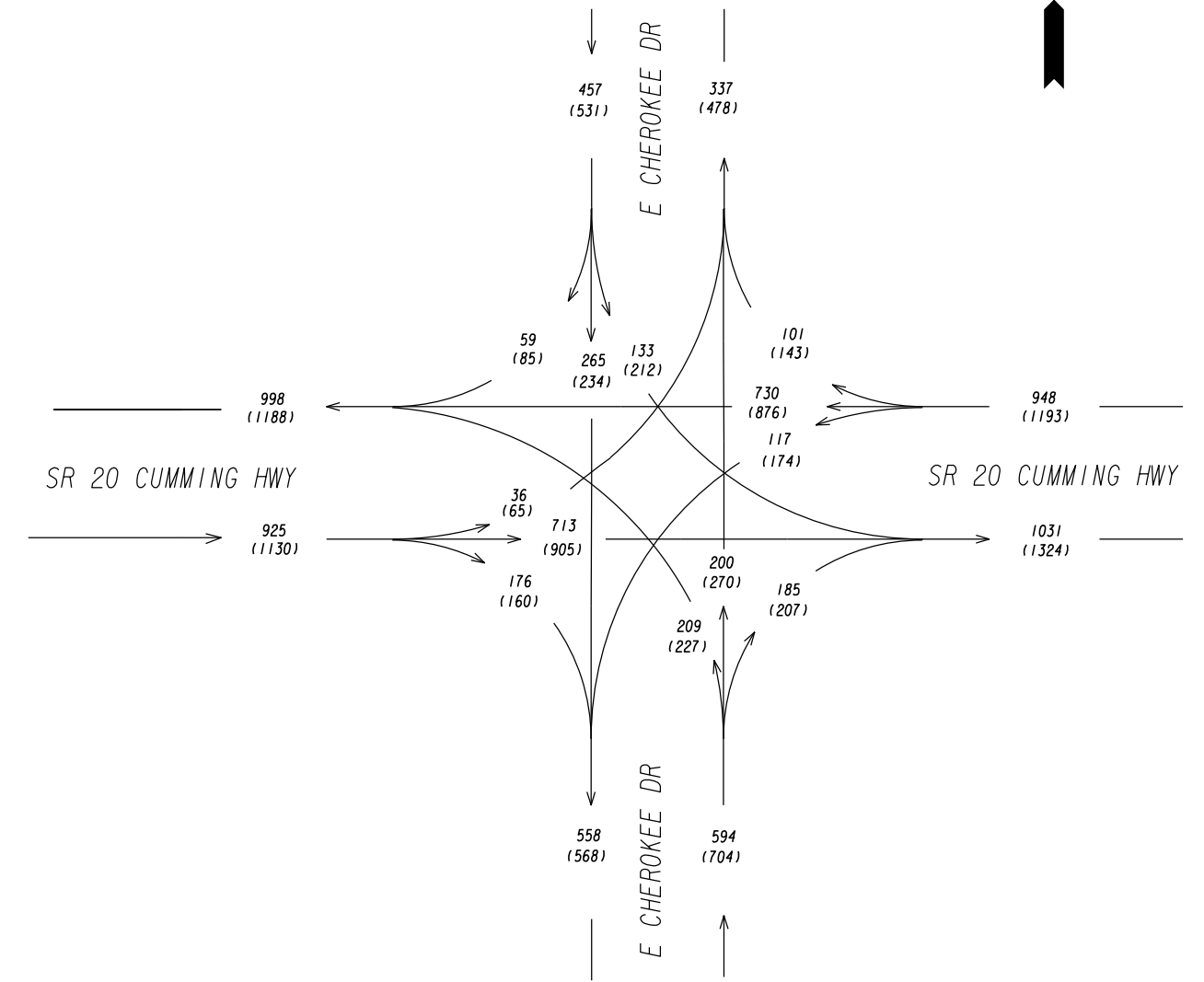
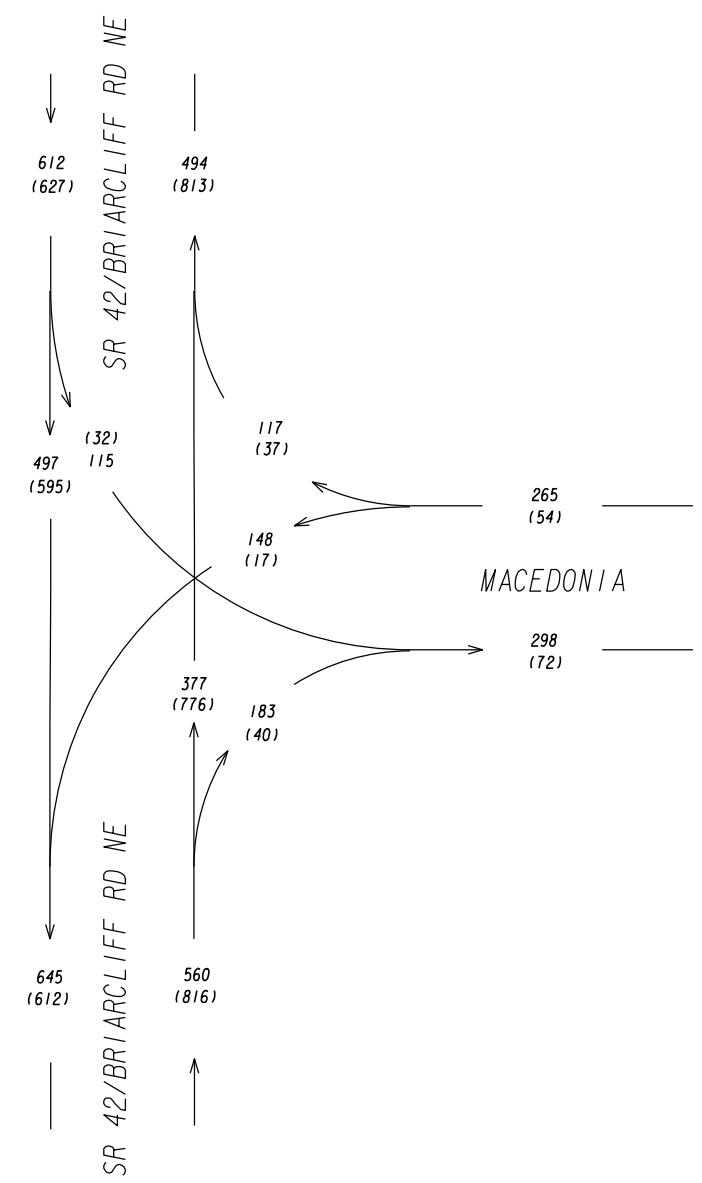
2039 DHV
AM (PM)

NOT TO SCALE

| REVISION DATES | | |
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TRAFFIC DIAGRAM
E. CHEROKEE DR @ HALEY FARMS RD
E. CHEROKEE DR @ WATER TANK RD

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| CHECKED: | DATE: | DRAWING No. |
| BACKCHECKED: | DATE: | 10-0029 |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |



2039 DHV
AM (PM)

NOT TO SCALE

REVISION DATES

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TRAFFIC DIAGRAM
E. CHEROKEE DR @ MACEDONIA
E. CHEROKEE DR @ SR 20/ CUMMING HWY

| | | |
|--------------|-------|-------------|
| CHECKED: | DATE: | DRAWING No. |
| BACKCHECKED: | DATE: | 10-0030 |
| CORRECTED: | DATE: | |
| VERIFIED: | DATE: | |

Canton, GA
Classified Turn Movement Count

Site 1 of 23
Mill Creek Rd
Local Access
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.130375°, -84.494293°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
All vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|-----------------------------|-------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 0600 - 0615 | 12 | 0 | 5 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 1 | 21 | 35 | 0 | 57 | 11 | 77 | 1 | 0 | 89 |
| 0615 - 0630 | 20 | 1 | 3 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 2 | 51 | 49 | 0 | 102 | 14 | 102 | 1 | 0 | 117 |
| 0630 - 0645 | 28 | 2 | 5 | 0 | 35 | 0 | 1 | 1 | 0 | 2 | 12 | 59 | 62 | 0 | 133 | 26 | 163 | 9 | 0 | 198 |
| 0645 - 0700 | 31 | 11 | 9 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 31 | 53 | 104 | 0 | 188 | 22 | 153 | 17 | 0 | 192 |
| Hourly Total | 91 | 14 | 22 | 0 | 127 | 0 | 1 | 1 | 0 | 2 | 46 | 184 | 250 | 0 | 480 | 73 | 495 | 28 | 0 | 596 |
| 0700 - 0715 | 43 | 30 | 10 | 0 | 83 | 13 | 26 | 44 | 0 | 83 | 52 | 72 | 81 | 0 | 205 | 30 | 123 | 27 | 0 | 180 |
| 0715 - 0730 | 40 | 40 | 8 | 0 | 88 | 32 | 44 | 34 | 0 | 110 | 39 | 90 | 92 | 0 | 221 | 32 | 123 | 42 | 0 | 197 |
| 0730 - 0745 | 49 | 2 | 12 | 0 | 63 | 19 | 18 | 28 | 0 | 65 | 20 | 85 | 128 | 0 | 233 | 55 | 191 | 15 | 0 | 261 |
| 0745 - 0800 | 57 | 3 | 18 | 0 | 78 | 2 | 1 | 3 | 0 | 6 | 1 | 89 | 138 | 0 | 228 | 83 | 190 | 1 | 0 | 274 |
| Hourly Total | 189 | 75 | 48 | 0 | 312 | 66 | 89 | 109 | 0 | 264 | 112 | 336 | 439 | 0 | 887 | 200 | 627 | 85 | 0 | 912 |
| 0800 - 0815 | 52 | 1 | 19 | 0 | 72 | 1 | 0 | 0 | 0 | 1 | 3 | 103 | 112 | 0 | 218 | 26 | 155 | 1 | 0 | 182 |
| 0815 - 0830 | 91 | 0 | 22 | 0 | 113 | 2 | 0 | 2 | 0 | 4 | 0 | 103 | 95 | 0 | 198 | 30 | 188 | 0 | 0 | 218 |
| 0830 - 0845 | 49 | 2 | 13 | 0 | 64 | 1 | 3 | 1 | 0 | 5 | 2 | 98 | 82 | 1 | 183 | 44 | 152 | 2 | 0 | 198 |
| 0845 - 0900 | 62 | 1 | 14 | 0 | 77 | 0 | 0 | 1 | 0 | 1 | 0 | 114 | 74 | 0 | 188 | 26 | 161 | 1 | 0 | 188 |
| Hourly Total | 254 | 4 | 68 | 0 | 326 | 4 | 3 | 4 | 0 | 11 | 5 | 418 | 363 | 1 | 787 | 126 | 656 | 4 | 0 | 786 |
| Grand Total | 534 | 93 | 138 | 0 | 765 | 70 | 93 | 114 | 0 | 277 | 163 | 938 | 1052 | 1 | 2154 | 399 | 1778 | 117 | 0 | 2294 |
| Approach % | 69.80 | 12.16 | 18.04 | 0.00 | - | 25.27 | 33.57 | 41.16 | 0.00 | - | 7.57 | 43.55 | 48.84 | 0.05 | - | 17.39 | 77.51 | 5.10 | 0.00 | - |
| Intersection % | 9.73 | 1.69 | 2.51 | 0.00 | 13.93 | 1.28 | 1.69 | 2.08 | 0.00 | 5.05 | 2.97 | 17.09 | 19.16 | 0.02 | 39.23 | 7.27 | 32.39 | 2.13 | 0.00 | 41.79 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
All vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|-----------------------------|------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 1400 - 1415 | 61 | 10 | 13 | 0 | 84 | 2 | 4 | 10 | 0 | 16 | 7 | 134 | 42 | 0 | 183 | 11 | 107 | 12 | 0 | 130 |
| 1415 - 1430 | 39 | 9 | 27 | 0 | 75 | 25 | 19 | 34 | 0 | 78 | 11 | 122 | 58 | 0 | 191 | 17 | 88 | 11 | 0 | 116 |
| 1430 - 1445 | 64 | 0 | 20 | 0 | 84 | 5 | 1 | 5 | 0 | 11 | 4 | 164 | 51 | 0 | 219 | 15 | 122 | 1 | 0 | 138 |
| 1445 - 1500 | 61 | 0 | 18 | 0 | 79 | 3 | 2 | 3 | 0 | 8 | 4 | 137 | 69 | 0 | 210 | 18 | 107 | 2 | 0 | 127 |
| Hourly Total | 225 | 19 | 78 | 0 | 322 | 35 | 26 | 52 | 0 | 113 | 26 | 557 | 220 | 0 | 803 | 61 | 424 | 26 | 0 | 511 |
| 1500 - 1515 | 62 | 3 | 25 | 0 | 90 | 4 | 3 | 7 | 0 | 14 | 1 | 132 | 69 | 0 | 202 | 15 | 122 | 0 | 0 | 137 |
| 1515 - 1530 | 88 | 0 | 22 | 0 | 110 | 1 | 0 | 2 | 0 | 3 | 4 | 151 | 75 | 0 | 230 | 30 | 117 | 3 | 0 | 150 |
| 1530 - 1545 | 124 | 7 | 51 | 0 | 182 | 8 | 7 | 10 | 0 | 25 | 4 | 156 | 61 | 0 | 221 | 16 | 136 | 1 | 0 | 153 |
| 1545 - 1600 | 127 | 1 | 29 | 0 | 157 | 1 | 0 | 4 | 0 | 5 | 5 | 170 | 64 | 0 | 239 | 20 | 127 | 1 | 0 | 148 |
| Hourly Total | 401 | 11 | 127 | 0 | 539 | 14 | 10 | 23 | 0 | 47 | 14 | 609 | 269 | 0 | 892 | 81 | 502 | 5 | 0 | 588 |
| 1600 - 1615 | 115 | 5 | 32 | 0 | 152 | 2 | 3 | 8 | 0 | 13 | 3 | 164 | 54 | 0 | 221 | 10 | 127 | 1 | 0 | 138 |
| 1615 - 1630 | 113 | 4 | 54 | 0 | 171 | 1 | 0 | 9 | 0 | 10 | 7 | 181 | 55 | 0 | 243 | 20 | 150 | 0 | 0 | 170 |
| 1630 - 1645 | 117 | 2 | 33 | 0 | 152 | 6 | 2 | 4 | 0 | 12 | 4 | 182 | 64 | 0 | 250 | 18 | 163 | 0 | 0 | 181 |
| 1645 - 1700 | 106 | 1 | 22 | 0 | 129 | 1 | 0 | 6 | 0 | 7 | 8 | 192 | 65 | 0 | 265 | 27 | 139 | 0 | 0 | 166 |
| Hourly Total | 451 | 12 | 141 | 0 | 604 | 10 | 5 | 27 | 0 | 42 | 22 | 719 | 238 | 0 | 979 | 75 | 579 | 1 | 0 | 655 |
| 1700 - 1715 | 110 | 3 | 30 | 0 | 143 | 4 | 2 | 3 | 0 | 9 | 5 | 184 | 79 | 0 | 268 | 22 | 156 | 0 | 1 | 179 |
| 1715 - 1730 | 125 | 0 | 40 | 0 | 165 | 4 | 4 | 5 | 0 | 13 | 9 | 182 | 77 | 0 | 268 | 22 | 136 | 0 | 0 | 158 |
| 1730 - 1745 | 111 | 2 | 45 | 0 | 158 | 3 | 2 | 1 | 0 | 6 | 3 | 208 | 82 | 0 | 293 | 26 | 199 | 0 | 0 | 225 |
| 1745 - 1800 | 110 | 2 | 30 | 0 | 142 | 1 | 2 | 7 | 0 | 10 | 3 | 178 | 106 | 0 | 287 | 38 | 197 | 0 | 0 | 235 |
| Hourly Total | 456 | 7 | 145 | 0 | 608 | 12 | 10 | 16 | 0 | 38 | 20 | 752 | 344 | 0 | 1116 | 108 | 688 | 0 | 1 | 797 |
| Grand Total | 1533 | 49 | 491 | 0 | 2073 | 71 | 51 | 118 | 0 | 240 | 82 | 2637 | 1071 | 0 | 3790 | 325 | 2193 | 32 | 1 | 2551 |
| Approach % | 73.95 | 2.36 | 23.69 | 0.00 | - | 29.58 | 21.25 | 49.17 | 0.00 | - | 2.16 | 69.58 | 28.26 | 0.00 | - | 12.74 | 85.97 | 1.25 | 0.04 | - |
| Intersection % | 17.71 | 0.57 | 5.67 | 0.00 | 23.95 | 0.82 | 0.59 | 1.36 | 0.00 | 2.77 | 0.95 | 30.47 | 12.38 | 0.00 | 43.79 | 3.76 | 25.34 | 0.37 | 0.01 | 29.48 |

Canton, GA
Classified Turn Movement Count

Site 1 of 23
Mill Creek Rd
Local Access
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.130375°, -84.494293°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | | | |
|----------------|-----------------------------|-------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------------------------------|-------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 0600 - 0615 | 11 | 0 | 4 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 35 | 0 | 56 | 10 | 76 | 1 | 0 | 87 |
| 0615 - 0630 | 19 | 1 | 3 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 2 | 48 | 42 | 0 | 92 | 13 | 101 | 1 | 0 | 115 |
| 0630 - 0645 | 26 | 2 | 5 | 0 | 33 | 0 | 1 | 1 | 0 | 2 | 12 | 58 | 60 | 0 | 130 | 25 | 161 | 8 | 0 | 194 |
| 0645 - 0700 | 31 | 10 | 9 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 31 | 51 | 102 | 0 | 184 | 21 | 151 | 16 | 0 | 188 |
| Hourly Total | 87 | 13 | 21 | 0 | 121 | 0 | 1 | 1 | 0 | 2 | 46 | 177 | 239 | 0 | 462 | 69 | 489 | 26 | 0 | 584 |
| 0700 - 0715 | 40 | 27 | 10 | 0 | 77 | 12 | 24 | 41 | 0 | 77 | 50 | 67 | 81 | 0 | 198 | 29 | 120 | 27 | 0 | 176 |
| 0715 - 0730 | 38 | 39 | 7 | 0 | 84 | 29 | 42 | 33 | 0 | 104 | 38 | 85 | 91 | 0 | 214 | 32 | 121 | 40 | 0 | 193 |
| 0730 - 0745 | 49 | 2 | 12 | 0 | 63 | 19 | 17 | 28 | 0 | 64 | 20 | 83 | 125 | 0 | 228 | 54 | 189 | 15 | 0 | 258 |
| 0745 - 0800 | 56 | 2 | 17 | 0 | 75 | 2 | 1 | 3 | 0 | 6 | 0 | 86 | 135 | 0 | 221 | 80 | 184 | 1 | 0 | 265 |
| Hourly Total | 183 | 70 | 46 | 0 | 299 | 62 | 84 | 105 | 0 | 251 | 108 | 321 | 432 | 0 | 861 | 195 | 614 | 83 | 0 | 892 |
| 0800 - 0815 | 51 | 0 | 14 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 3 | 99 | 110 | 0 | 212 | 26 | 154 | 1 | 0 | 181 |
| 0815 - 0830 | 90 | 0 | 19 | 0 | 109 | 1 | 0 | 1 | 0 | 2 | 0 | 98 | 94 | 0 | 192 | 28 | 187 | 0 | 0 | 215 |
| 0830 - 0845 | 47 | 1 | 10 | 0 | 58 | 1 | 3 | 1 | 0 | 5 | 2 | 93 | 79 | 1 | 175 | 41 | 149 | 2 | 0 | 192 |
| 0845 - 0900 | 62 | 1 | 12 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 109 | 72 | 0 | 181 | 26 | 159 | 1 | 0 | 186 |
| Hourly Total | 250 | 2 | 55 | 0 | 307 | 2 | 3 | 2 | 0 | 7 | 5 | 399 | 355 | 1 | 760 | 121 | 649 | 4 | 0 | 774 |
| Grand Total | 520 | 85 | 122 | 0 | 727 | 64 | 88 | 108 | 0 | 260 | 159 | 897 | 1026 | 1 | 2083 | 385 | 1752 | 113 | 0 | 2250 |
| Approach % | 71.53 | 11.69 | 16.78 | 0.00 | - | 24.62 | 33.85 | 41.54 | 0.00 | - | 7.63 | 43.06 | 49.26 | 0.05 | - | 17.11 | 77.87 | 5.02 | 0.00 | - |
| Intersection % | 9.77 | 1.60 | 2.29 | 0.00 | 13.67 | 1.20 | 1.65 | 2.03 | 0.00 | 4.89 | 2.99 | 16.86 | 19.29 | 0.02 | 39.15 | 7.24 | 32.93 | 2.12 | 0.00 | 42.29 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | | | |
|----------------|-----------------------------|------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------------------------------|-------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 1400 - 1415 | 59 | 10 | 13 | 0 | 82 | 1 | 4 | 10 | 0 | 15 | 7 | 131 | 42 | 0 | 180 | 11 | 107 | 11 | 0 | 129 |
| 1415 - 1430 | 37 | 9 | 27 | 0 | 73 | 22 | 15 | 31 | 0 | 68 | 9 | 117 | 58 | 0 | 184 | 15 | 88 | 10 | 0 | 113 |
| 1430 - 1445 | 61 | 0 | 20 | 0 | 81 | 4 | 0 | 5 | 0 | 9 | 3 | 161 | 50 | 0 | 214 | 12 | 122 | 1 | 0 | 135 |
| 1445 - 1500 | 61 | 0 | 17 | 0 | 78 | 3 | 1 | 3 | 0 | 7 | 4 | 136 | 67 | 0 | 207 | 17 | 107 | 0 | 0 | 124 |
| Hourly Total | 218 | 19 | 77 | 0 | 314 | 30 | 20 | 49 | 0 | 99 | 23 | 545 | 217 | 0 | 785 | 55 | 424 | 22 | 0 | 501 |
| 1500 - 1515 | 58 | 3 | 24 | 0 | 85 | 4 | 2 | 7 | 0 | 13 | 1 | 124 | 67 | 0 | 192 | 15 | 122 | 0 | 0 | 137 |
| 1515 - 1530 | 87 | 0 | 22 | 0 | 109 | 1 | 0 | 2 | 0 | 3 | 4 | 150 | 73 | 0 | 227 | 30 | 117 | 3 | 0 | 150 |
| 1530 - 1545 | 121 | 7 | 47 | 0 | 175 | 8 | 7 | 10 | 0 | 25 | 4 | 152 | 59 | 0 | 215 | 15 | 133 | 1 | 0 | 149 |
| 1545 - 1600 | 122 | 1 | 28 | 0 | 151 | 1 | 0 | 4 | 0 | 5 | 5 | 166 | 62 | 0 | 233 | 14 | 125 | 1 | 0 | 140 |
| Hourly Total | 388 | 11 | 121 | 0 | 520 | 14 | 9 | 23 | 0 | 46 | 14 | 592 | 261 | 0 | 867 | 74 | 497 | 5 | 0 | 576 |
| 1600 - 1615 | 110 | 5 | 29 | 0 | 144 | 2 | 3 | 8 | 0 | 13 | 3 | 161 | 53 | 0 | 217 | 10 | 123 | 1 | 0 | 134 |
| 1615 - 1630 | 110 | 4 | 49 | 0 | 163 | 1 | 0 | 9 | 0 | 10 | 7 | 178 | 55 | 0 | 240 | 20 | 146 | 0 | 0 | 166 |
| 1630 - 1645 | 117 | 2 | 31 | 0 | 150 | 6 | 2 | 4 | 0 | 12 | 4 | 180 | 62 | 0 | 246 | 18 | 160 | 0 | 0 | 178 |
| 1645 - 1700 | 103 | 1 | 22 | 0 | 126 | 1 | 0 | 6 | 0 | 7 | 8 | 190 | 64 | 0 | 262 | 27 | 136 | 0 | 0 | 163 |
| Hourly Total | 440 | 12 | 131 | 0 | 583 | 10 | 5 | 27 | 0 | 42 | 22 | 709 | 234 | 0 | 965 | 75 | 565 | 1 | 0 | 641 |
| 1700 - 1715 | 110 | 3 | 30 | 0 | 143 | 4 | 2 | 3 | 0 | 9 | 5 | 181 | 79 | 0 | 265 | 22 | 150 | 0 | 0 | 172 |
| 1715 - 1730 | 120 | 0 | 40 | 0 | 160 | 4 | 4 | 5 | 0 | 13 | 9 | 180 | 76 | 0 | 265 | 22 | 132 | 0 | 0 | 154 |
| 1730 - 1745 | 110 | 2 | 45 | 0 | 157 | 3 | 2 | 1 | 0 | 6 | 3 | 205 | 79 | 0 | 287 | 26 | 196 | 0 | 0 | 222 |
| 1745 - 1800 | 109 | 2 | 30 | 0 | 141 | 1 | 2 | 7 | 0 | 10 | 3 | 176 | 104 | 0 | 283 | 38 | 192 | 0 | 0 | 230 |
| Hourly Total | 449 | 7 | 145 | 0 | 601 | 12 | 10 | 16 | 0 | 38 | 20 | 742 | 338 | 0 | 1100 | 108 | 670 | 0 | 0 | 778 |
| Grand Total | 1495 | 49 | 474 | 0 | 2018 | 66 | 44 | 115 | 0 | 225 | 79 | 2588 | 1050 | 0 | 3717 | 312 | 2156 | 28 | 0 | 2496 |
| Approach % | 74.08 | 2.43 | 23.49 | 0.00 | - | 29.33 | 19.56 | 51.11 | 0.00 | - | 2.13 | 69.63 | 28.25 | 0.00 | - | 12.50 | 86.38 | 1.12 | 0.00 | - |
| Intersection % | 17.68 | 0.58 | 5.61 | 0.00 | 23.86 | 0.78 | 0.52 | 1.36 | 0.00 | 2.66 | 0.93 | 30.61 | 12.42 | 0.00 | 43.96 | 3.69 | 25.50 | 0.33 | 0.00 | 29.52 |

Canton, GA
Classified Turn Movement Count

Site 1 of 23
Mill Creek Rd
Local Access
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.130375°, -84.494293°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|-----------------------------|-------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 0600 - 0615 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 |
| 0615 - 0630 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 0 | 10 | 1 | 1 | 0 | 0 | 2 |
| 0630 - 0645 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 1 | 2 | 1 | 0 | 4 |
| 0645 - 0700 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 1 | 2 | 1 | 0 | 4 |
| Hourly Total | 4 | 1 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 11 | 0 | 18 | 4 | 6 | 2 | 0 | 12 |
| 0700 - 0715 | 3 | 3 | 0 | 0 | 6 | 1 | 2 | 3 | 0 | 6 | 2 | 5 | 0 | 0 | 7 | 1 | 3 | 0 | 0 | 4 |
| 0715 - 0730 | 2 | 1 | 1 | 0 | 4 | 3 | 2 | 1 | 0 | 6 | 1 | 5 | 1 | 0 | 7 | 0 | 2 | 2 | 0 | 4 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 5 | 1 | 2 | 0 | 0 | 3 |
| 0745 - 0800 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 0 | 7 | 3 | 6 | 0 | 0 | 9 |
| Hourly Total | 6 | 5 | 2 | 0 | 13 | 4 | 5 | 4 | 0 | 13 | 4 | 15 | 7 | 0 | 26 | 5 | 13 | 2 | 0 | 20 |
| 0800 - 0815 | 1 | 1 | 5 | 0 | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 2 | 0 | 6 | 0 | 1 | 0 | 0 | 1 |
| 0815 - 0830 | 1 | 0 | 3 | 0 | 4 | 1 | 0 | 1 | 0 | 2 | 0 | 5 | 1 | 0 | 6 | 2 | 1 | 0 | 0 | 3 |
| 0830 - 0845 | 2 | 1 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 8 | 3 | 3 | 0 | 0 | 6 |
| 0845 - 0900 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 2 | 0 | 7 | 0 | 2 | 0 | 0 | 2 |
| Hourly Total | 4 | 2 | 13 | 0 | 19 | 2 | 0 | 2 | 0 | 4 | 0 | 19 | 8 | 0 | 27 | 5 | 7 | 0 | 0 | 12 |
| Grand Total | 14 | 8 | 16 | 0 | 38 | 6 | 5 | 6 | 0 | 17 | 4 | 41 | 26 | 0 | 71 | 14 | 26 | 4 | 0 | 44 |
| Approach % | 36.84 | 21.05 | 42.11 | 0.00 | - | 35.29 | 29.41 | 35.29 | 0.00 | - | 5.63 | 57.75 | 36.62 | 0.00 | - | 31.82 | 59.09 | 9.09 | 0.00 | - |
| Intersection % | 8.24 | 4.71 | 9.41 | 0.00 | 22.35 | 3.53 | 2.94 | 3.53 | 0.00 | 10.00 | 2.35 | 24.12 | 15.29 | 0.00 | 41.76 | 8.24 | 15.29 | 2.35 | 0.00 | 25.88 |

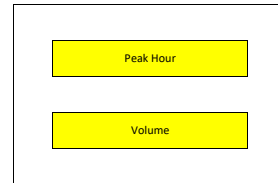
1400 - 1800 (Weekday 4h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound Mill Creek Rd | | | | | Southbound Local Access | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|-----------------------------|------|-------|--------|-----------|----------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|-----------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 1.1 | 1.2 | 1.3 | 1.4 | | 1.5 | 1.6 | 1.7 | 1.8 | | 1.9 | 1.10 | 1.11 | 1.12 | | 1.13 | 1.14 | 1.15 | 1.16 | |
| 1400 - 1415 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 1 |
| 1415 - 1430 | 2 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 0 | 10 | 2 | 5 | 0 | 0 | 7 | 2 | 0 | 1 | 0 | 3 |
| 1430 - 1445 | 3 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 2 | 1 | 3 | 1 | 0 | 5 | 3 | 0 | 0 | 0 | 3 |
| 1445 - 1500 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 1 | 0 | 2 | 0 | 3 |
| Hourly Total | 7 | 0 | 1 | 0 | 8 | 5 | 6 | 3 | 0 | 14 | 3 | 12 | 3 | 0 | 18 | 6 | 0 | 4 | 0 | 10 |
| 1500 - 1515 | 4 | 0 | 1 | 0 | 5 | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 1515 - 1530 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1530 - 1545 | 3 | 0 | 4 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 6 | 1 | 3 | 0 | 0 | 4 |
| 1545 - 1600 | 5 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 6 | 6 | 2 | 0 | 0 | 8 |
| Hourly Total | 13 | 0 | 6 | 0 | 19 | 0 | 1 | 0 | 0 | 1 | 0 | 17 | 8 | 0 | 25 | 7 | 5 | 0 | 0 | 12 |
| 1600 - 1615 | 5 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 4 |
| 1615 - 1630 | 3 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1630 - 1645 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 3 | 0 | 0 | 3 |
| 1645 - 1700 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 3 | 0 | 0 | 3 |
| Hourly Total | 11 | 0 | 10 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 0 | 14 | 0 | 14 | 0 | 0 | 14 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 6 | 0 | 1 | 7 |
| 1715 - 1730 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1730 - 1745 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 6 | 0 | 3 | 0 | 0 | 3 |
| 1745 - 1800 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 5 | 0 | 15 | 0 | 18 | 0 | 1 | 19 |
| Grand Total | 38 | 0 | 17 | 0 | 55 | 5 | 7 | 3 | 0 | 15 | 3 | 49 | 20 | 0 | 72 | 13 | 37 | 4 | 1 | 55 |
| Approach % | 69.09 | 0.00 | 30.91 | 0.00 | - | 33.33 | 46.67 | 20.00 | 0.00 | - | 4.17 | 68.06 | 27.78 | 0.00 | - | 23.64 | 67.27 | 7.27 | 1.82 | - |
| Intersection % | 19.29 | 0.00 | 8.63 | 0.00 | 27.92 | 2.54 | 3.55 | 1.52 | 0.00 | 7.61 | 1.52 | 24.87 | 10.15 | 0.00 | 36.55 | 6.60 | 18.78 | 2.03 | 0.51 | 27.92 |

Canton, GA
Peak Hour Turning Movement Count



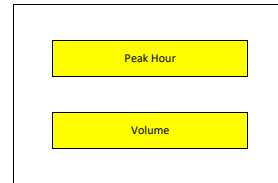
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 3h Session) (13-02-2) |
| Peak Hour | 0700 - 0800 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 4h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 2 of 23

Local Access
Copper Ridge Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long

34.130785°, -84.491746°

Date

Thursday, February 13, 2020

Weather

Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 0 | 10 | 2 | 96 | 0 | 0 | 98 | 0 | 186 | 1 | 0 | 187 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 2 | 125 | 0 | 0 | 127 | 0 | 187 | 0 | 0 | 187 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 13 | 4 | 111 | 0 | 0 | 115 | 0 | 226 | 0 | 0 | 226 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 13 | 0 | 118 | 0 | 0 | 118 | 0 | 263 | 3 | 0 | 266 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 43 | 0 | 47 | 8 | 450 | 0 | 0 | 458 | 0 | 862 | 4 | 0 | 866 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 12 | 6 | 112 | 0 | 0 | 118 | 0 | 166 | 0 | 0 | 166 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 1 | 129 | 0 | 0 | 130 | 0 | 216 | 1 | 0 | 217 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 0 | 10 | 1 | 115 | 0 | 0 | 116 | 0 | 196 | 1 | 0 | 197 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 129 | 0 | 0 | 129 | 0 | 171 | 1 | 0 | 172 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 27 | 0 | 33 | 8 | 485 | 0 | 0 | 493 | 0 | 749 | 3 | 0 | 752 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 70 | 0 | 80 | 16 | 935 | 0 | 0 | 951 | 0 | 1611 | 7 | 0 | 1618 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 12.50 | 0.00 | 87.50 | 0.00 | - | 1.68 | 98.32 | 0.00 | 0.00 | - | 0.00 | 99.57 | 0.43 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | 2.64 | 0.00 | 3.02 | 0.60 | 35.30 | 0.00 | 0.00 | 35.90 | 0.00 | 60.82 | 0.26 | 0.00 | 61.08 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 5 | 5 | 194 | 0 | 0 | 199 | 0 | 135 | 2 | 0 | 137 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 12 | 213 | 0 | 0 | 225 | 0 | 154 | 0 | 0 | 154 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 6 | 223 | 0 | 0 | 229 | 0 | 190 | 1 | 0 | 191 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 5 | 216 | 0 | 0 | 221 | 0 | 158 | 1 | 0 | 159 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 16 | 0 | 19 | 28 | 846 | 0 | 0 | 874 | 0 | 637 | 4 | 0 | 641 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 7 | 210 | 0 | 0 | 217 | 0 | 175 | 3 | 0 | 178 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 6 | 225 | 0 | 0 | 231 | 0 | 162 | 2 | 0 | 164 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 | 6 | 249 | 0 | 0 | 255 | 0 | 211 | 1 | 0 | 212 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 9 | 190 | 0 | 0 | 199 | 0 | 221 | 1 | 0 | 222 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 0 | 24 | 28 | 874 | 0 | 0 | 902 | 0 | 769 | 7 | 0 | 776 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 39 | 0 | 43 | 56 | 1720 | 0 | 0 | 1776 | 0 | 1406 | 11 | 0 | 1417 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 9.30 | 0.00 | 90.70 | 0.00 | - | 3.15 | 96.85 | 0.00 | 0.00 | - | 0.00 | 99.22 | 0.78 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 1.21 | 0.00 | 1.33 | 1.73 | 53.15 | 0.00 | 0.00 | 54.88 | 0.00 | 43.45 | 0.34 | 0.00 | 43.79 |

Canton, GA
Classified Turn Movement Count

Site 2 of 23

Local Access
Copper Ridge Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long

34.130785°, -84.491746°

Date

Thursday, February 13, 2020

Weather

Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)

Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 0 | 9 | 2 | 90 | 0 | 0 | 92 | 0 | 183 | 0 | 0 | 183 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 1 | 119 | 0 | 0 | 120 | 0 | 184 | 0 | 0 | 184 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 4 | 110 | 0 | 0 | 114 | 0 | 224 | 0 | 0 | 224 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 0 | 111 | 0 | 0 | 111 | 0 | 255 | 2 | 0 | 257 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 39 | 0 | 43 | 7 | 430 | 0 | 0 | 437 | 0 | 846 | 2 | 0 | 848 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 12 | 6 | 104 | 0 | 0 | 110 | 0 | 165 | 0 | 0 | 165 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 120 | 0 | 0 | 120 | 0 | 214 | 1 | 0 | 215 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 0 | 9 | 1 | 107 | 0 | 0 | 108 | 0 | 193 | 0 | 0 | 193 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 121 | 0 | 0 | 121 | 0 | 167 | 1 | 0 | 168 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 25 | 0 | 31 | 7 | 452 | 0 | 0 | 459 | 0 | 739 | 2 | 0 | 741 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 64 | 0 | 74 | 14 | 882 | 0 | 0 | 896 | 0 | 1585 | 4 | 0 | 1589 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 13.51 | 0.00 | 86.49 | 0.00 | - | 1.56 | 98.44 | 0.00 | 0.00 | - | 0.00 | 99.75 | 0.25 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.39 | 0.00 | 2.50 | 0.00 | 2.89 | 0.55 | 34.47 | 0.00 | 0.00 | 35.01 | 0.00 | 61.94 | 0.16 | 0.00 | 62.09 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)

Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 5 | 5 | 189 | 0 | 0 | 194 | 0 | 130 | 2 | 0 | 132 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 12 | 205 | 0 | 0 | 217 | 0 | 150 | 0 | 0 | 150 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 6 | 219 | 0 | 0 | 225 | 0 | 187 | 1 | 0 | 188 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 5 | 213 | 0 | 0 | 218 | 0 | 157 | 1 | 0 | 158 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 15 | 0 | 18 | 28 | 826 | 0 | 0 | 854 | 0 | 624 | 4 | 0 | 628 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 7 | 206 | 0 | 0 | 213 | 0 | 170 | 3 | 0 | 173 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 6 | 223 | 0 | 0 | 229 | 0 | 156 | 2 | 0 | 158 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 | 6 | 246 | 0 | 0 | 252 | 0 | 207 | 1 | 0 | 208 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 9 | 188 | 0 | 0 | 197 | 0 | 217 | 1 | 0 | 218 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 0 | 24 | 28 | 863 | 0 | 0 | 891 | 0 | 750 | 7 | 0 | 757 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 38 | 0 | 42 | 56 | 1689 | 0 | 0 | 1745 | 0 | 1374 | 11 | 0 | 1385 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 9.52 | 0.00 | 90.48 | 0.00 | - | 3.21 | 96.79 | 0.00 | 0.00 | - | 0.00 | 99.21 | 0.79 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 1.20 | 0.00 | 1.32 | 1.77 | 53.25 | 0.00 | 0.00 | 55.01 | 0.00 | 43.32 | 0.35 | 0.00 | 43.66 |

Canton, GA
Classified Turn Movement Count

Site 2 of 23

Local Access
Copper Ridge Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long

34.130785°, -84.491746°

Date

Thursday, February 13, 2020

Weather

Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)

Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 0 | 3 | 1 | 0 | 4 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 6 | 0 | 0 | 7 | 0 | 3 | 0 | 0 | 3 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 7 | 0 | 0 | 7 | 0 | 8 | 1 | 0 | 9 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 1 | 20 | 0 | 0 | 21 | 0 | 16 | 2 | 0 | 18 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 1 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 9 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 2 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 3 | 1 | 0 | 4 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 33 | 0 | 0 | 34 | 0 | 10 | 1 | 0 | 11 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 2 | 53 | 0 | 0 | 55 | 0 | 26 | 3 | 0 | 29 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 3.64 | 96.36 | 0.00 | 0.00 | - | 0.00 | 89.66 | 10.34 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.67 | 0.00 | 6.67 | 2.22 | 58.89 | 0.00 | 0.00 | 61.11 | 0.00 | 28.89 | 3.33 | 0.00 | 32.22 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)

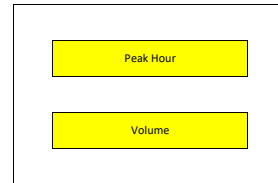
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Local Access | | | | | Copper Ridge Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 2.1 | Thru 2.2 | Right 2.3 | U-Turn 2.4 | App Total | Left 2.5 | Thru 2.6 | Right 2.7 | U-Turn 2.8 | App Total | Left 2.9 | Thru 2.10 | Right 2.11 | U-Turn 2.12 | App Total | Left 2.13 | Thru 2.14 | Right 2.15 | U-Turn 2.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 5 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 4 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 3 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 20 | 0 | 0 | 20 | 0 | 13 | 0 | 0 | 13 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 5 | 0 | 0 | 5 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 6 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 19 | 0 | 0 | 19 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 31 | 0 | 0 | 31 | 0 | 32 | 0 | 0 | 32 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.56 | 0.00 | 1.56 | 0.00 | 48.44 | 0.00 | 0.00 | 48.44 | 0.00 | 50.00 | 0.00 | 0.00 | 50.00 |

Canton, GA
Peak Hour Turning Movement Count

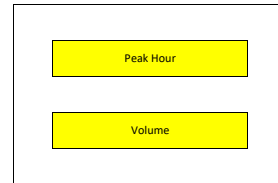


| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |





| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 3 of 23
Thornwood Dr
S Holly Springs Rd
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.134991°, -84.474903°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|--------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Thornwood Dr | | | | | S Holly Springs Rd | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 3.1 | Thru 3.2 | Right 3.3 | U-Turn 3.4 | App Total | Left 3.5 | Thru 3.6 | Right 3.7 | U-Turn 3.8 | App Total | Left 3.9 | Thru 3.10 | Right 3.11 | U-Turn 3.12 | App Total | Left 3.13 | Thru 3.14 | Right 3.15 | U-Turn 3.16 | App Total |
| 0700 - 0715 | 3 | 0 | 0 | 0 | 3 | 5 | 0 | 10 | 0 | 15 | 3 | 89 | 2 | 0 | 94 | 0 | 119 | 0 | 0 | 119 |
| 0715 - 0730 | 8 | 0 | 2 | 0 | 10 | 3 | 0 | 15 | 0 | 18 | 4 | 97 | 0 | 0 | 101 | 0 | 139 | 0 | 0 | 139 |
| 0730 - 0745 | 2 | 0 | 6 | 0 | 8 | 4 | 0 | 14 | 0 | 18 | 6 | 100 | 2 | 0 | 108 | 0 | 147 | 7 | 0 | 154 |
| 0745 - 0800 | 3 | 0 | 0 | 0 | 3 | 10 | 0 | 18 | 0 | 28 | 3 | 112 | 1 | 0 | 116 | 0 | 151 | 1 | 0 | 152 |
| Hourly Total | 16 | 0 | 8 | 0 | 24 | 22 | 0 | 57 | 0 | 79 | 16 | 398 | 5 | 0 | 419 | 0 | 556 | 8 | 0 | 564 |
| 0800 - 0815 | 3 | 0 | 4 | 0 | 7 | 12 | 0 | 11 | 0 | 23 | 2 | 107 | 1 | 0 | 110 | 1 | 121 | 2 | 0 | 124 |
| 0815 - 0830 | 5 | 0 | 1 | 0 | 6 | 4 | 1 | 9 | 0 | 14 | 4 | 112 | 2 | 0 | 118 | 0 | 163 | 1 | 0 | 164 |
| 0830 - 0845 | 3 | 0 | 1 | 0 | 4 | 1 | 0 | 7 | 0 | 8 | 3 | 106 | 0 | 0 | 109 | 1 | 149 | 0 | 0 | 150 |
| 0845 - 0900 | 5 | 0 | 1 | 0 | 6 | 1 | 0 | 8 | 0 | 9 | 4 | 121 | 1 | 0 | 126 | 0 | 136 | 2 | 0 | 138 |
| Hourly Total | 16 | 0 | 7 | 0 | 23 | 18 | 1 | 35 | 0 | 54 | 13 | 446 | 4 | 0 | 463 | 2 | 569 | 5 | 0 | 576 |
| Grand Total | 32 | 0 | 15 | 0 | 47 | 40 | 1 | 92 | 0 | 133 | 29 | 844 | 9 | 0 | 882 | 2 | 1125 | 13 | 0 | 1140 |
| Approach % | 68.09 | 0.00 | 31.91 | 0.00 | - | 30.08 | 0.75 | 69.17 | 0.00 | - | 3.29 | 95.69 | 1.02 | 0.00 | - | 0.18 | 98.68 | 1.14 | 0.00 | - |
| Intersection % | 1.45 | 0.00 | 0.68 | 0.00 | 2.13 | 1.82 | 0.05 | 4.18 | 0.00 | 6.04 | 1.32 | 38.33 | 0.41 | 0.00 | 40.05 | 0.09 | 51.09 | 0.59 | 0.00 | 51.77 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|--------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Thornwood Dr | | | | | S Holly Springs Rd | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 3.1 | Thru 3.2 | Right 3.3 | U-Turn 3.4 | App Total | Left 3.5 | Thru 3.6 | Right 3.7 | U-Turn 3.8 | App Total | Left 3.9 | Thru 3.10 | Right 3.11 | U-Turn 3.12 | App Total | Left 3.13 | Thru 3.14 | Right 3.15 | U-Turn 3.16 | App Total |
| 1600 - 1615 | 2 | 0 | 1 | 0 | 3 | 5 | 0 | 5 | 0 | 10 | 4 | 159 | 5 | 0 | 168 | 0 | 109 | 5 | 0 | 114 |
| 1615 - 1630 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 9 | 0 | 10 | 12 | 148 | 4 | 0 | 164 | 2 | 132 | 2 | 0 | 136 |
| 1630 - 1645 | 3 | 0 | 2 | 0 | 5 | 1 | 0 | 6 | 0 | 7 | 12 | 171 | 8 | 0 | 191 | 0 | 158 | 4 | 0 | 162 |
| 1645 - 1700 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 9 | 0 | 11 | 15 | 163 | 6 | 0 | 184 | 3 | 133 | 2 | 0 | 138 |
| Hourly Total | 5 | 0 | 6 | 0 | 11 | 9 | 0 | 29 | 0 | 38 | 43 | 641 | 23 | 0 | 707 | 5 | 532 | 13 | 0 | 550 |
| 1700 - 1715 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 5 | 0 | 9 | 8 | 140 | 5 | 0 | 153 | 2 | 163 | 3 | 0 | 168 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 0 | 9 | 14 | 156 | 3 | 0 | 173 | 1 | 137 | 3 | 0 | 141 |
| 1730 - 1745 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 8 | 0 | 10 | 15 | 169 | 5 | 0 | 189 | 1 | 180 | 4 | 0 | 185 |
| 1745 - 1800 | 3 | 0 | 2 | 0 | 5 | 0 | 0 | 9 | 0 | 9 | 9 | 137 | 4 | 0 | 150 | 1 | 176 | 6 | 0 | 183 |
| Hourly Total | 8 | 0 | 2 | 0 | 10 | 6 | 3 | 28 | 0 | 37 | 46 | 602 | 17 | 0 | 665 | 5 | 656 | 16 | 0 | 677 |
| Grand Total | 13 | 0 | 8 | 0 | 21 | 15 | 3 | 57 | 0 | 75 | 89 | 1243 | 40 | 0 | 1372 | 10 | 1188 | 29 | 0 | 1227 |
| Approach % | 61.90 | 0.00 | 38.10 | 0.00 | - | 20.00 | 4.00 | 76.00 | 0.00 | - | 6.49 | 90.60 | 2.92 | 0.00 | - | 0.81 | 96.82 | 2.36 | 0.00 | - |
| Intersection % | 0.48 | 0.00 | 0.30 | 0.00 | 0.78 | 0.56 | 0.11 | 2.12 | 0.00 | 2.78 | 3.30 | 46.12 | 1.48 | 0.00 | 50.91 | 0.37 | 44.08 | 1.08 | 0.00 | 45.53 |

Canton, GA
Classified Turn Movement Count

Site 3 of 23
Thornwood Dr
S Holly Springs Rd
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.134991°, -84.474903°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

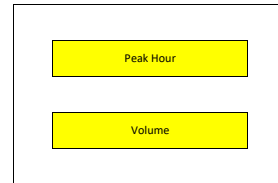
| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|--------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Thornwood Dr | | | | | S Holly Springs Rd | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 3.1 | Thru 3.2 | Right 3.3 | U-Turn 3.4 | App Total | Left 3.5 | Thru 3.6 | Right 3.7 | U-Turn 3.8 | App Total | Left 3.9 | Thru 3.10 | Right 3.11 | U-Turn 3.12 | App Total | Left 3.13 | Thru 3.14 | Right 3.15 | U-Turn 3.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 2 |
| 0730 - 0745 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 6 | 0 | 3 | 0 | 0 | 3 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 1 | 0 | 19 | 0 | 13 | 0 | 0 | 13 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 2 |
| 0815 - 0830 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 9 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 2 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 0 | 0 | 10 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 5 | 26 | 1 | 0 | 32 | 0 | 8 | 1 | 0 | 9 |
| Grand Total | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 5 | 44 | 2 | 0 | 51 | 0 | 21 | 1 | 0 | 22 |
| Approach % | 0.00 | 0.00 | 100.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | 0.00 | - | 9.80 | 86.27 | 3.92 | 0.00 | - | 0.00 | 95.45 | 4.55 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 2.63 | 0.00 | 2.63 | 1.32 | 0.00 | 0.00 | 0.00 | 1.32 | 6.58 | 57.89 | 2.63 | 0.00 | 67.11 | 0.00 | 27.63 | 1.32 | 0.00 | 28.95 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|--------------|-------------|--------------|---------------|--------------|--------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Thornwood Dr | | | | | S Holly Springs Rd | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 3.1 | Thru 3.2 | Right 3.3 | U-Turn 3.4 | App Total | Left 3.5 | Thru 3.6 | Right 3.7 | U-Turn 3.8 | App Total | Left 3.9 | Thru 3.10 | Right 3.11 | U-Turn 3.12 | App Total | Left 3.13 | Thru 3.14 | Right 3.15 | U-Turn 3.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 3 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 4 |
| 1630 - 1645 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 7 | 0 | 3 | 0 | 0 | 3 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 |
| Hourly Total | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 10 | 1 | 0 | 17 | 0 | 11 | 0 | 0 | 11 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 6 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 3 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 7 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 7 | 0 | 17 | 0 | 0 | 17 |
| Grand Total | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 15 | 2 | 0 | 24 | 0 | 28 | 0 | 0 | 28 |
| Approach % | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 29.17 | 62.50 | 8.33 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 1.89 | 0.00 | 1.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.21 | 28.30 | 3.77 | 0.00 | 45.28 | 0.00 | 52.83 | 0.00 | 0.00 | 52.83 |



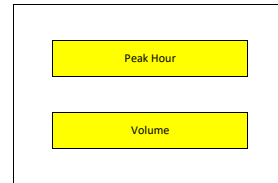
| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 4 of 23

Local Access
Ranchwood Trail
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.139169°, -84.463459°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 1800 (Weekday 12h Session) (13-02-2020)
All vehicles

| TIME | Northbound Local Access | | | | | Southbound Ranchwood Trail | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|----------------------------|-------------|--------------|---------------|--------------|-------------------------------|-------------|--------------|---------------|--------------|-----------------------------------|--------------|---------------|----------------|--------------|-----------------------------------|--------------|---------------|----------------|--------------|
| | Left 4.1 | Thru 4.2 | Right 4.3 | U-Turn 4.4 | App Total | Left 4.5 | Thru 4.6 | Right 4.7 | U-Turn 4.8 | App Total | Left 4.9 | Thru 4.10 | Right 4.11 | U-Turn 4.12 | App Total | Left 4.13 | Thru 4.14 | Right 4.15 | U-Turn 4.16 | App Total |
| 0600 - 0615 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 4 | 0 | 23 | 1 | 30 | 0 | 0 | 31 | 0 | 54 | 0 | 0 | 54 |
| 0615 - 0630 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 4 | 0 | 20 | 0 | 49 | 0 | 0 | 49 | 0 | 83 | 0 | 0 | 83 |
| 0630 - 0645 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 18 | 0 | 44 | 1 | 66 | 0 | 0 | 67 | 0 | 108 | 3 | 0 | 111 |
| 0645 - 0700 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 11 | 0 | 44 | 1 | 78 | 0 | 0 | 79 | 0 | 130 | 6 | 0 | 136 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 42 | 0 | 131 | 3 | 223 | 0 | 0 | 226 | 0 | 375 | 9 | 0 | 384 |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 13 | 0 | 39 | 2 | 94 | 0 | 0 | 96 | 0 | 101 | 6 | 0 | 107 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 9 | 0 | 36 | 4 | 94 | 0 | 0 | 98 | 0 | 128 | 6 | 0 | 134 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 10 | 0 | 39 | 1 | 107 | 0 | 0 | 108 | 0 | 144 | 14 | 0 | 158 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 13 | 0 | 55 | 7 | 117 | 0 | 0 | 124 | 0 | 129 | 8 | 0 | 137 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 124 | 0 | 45 | 0 | 169 | 14 | 412 | 0 | 0 | 426 | 0 | 502 | 34 | 0 | 536 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 11 | 0 | 46 | 4 | 115 | 0 | 0 | 119 | 0 | 115 | 6 | 0 | 121 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 10 | 0 | 51 | 5 | 109 | 0 | 0 | 114 | 0 | 147 | 7 | 0 | 154 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 13 | 0 | 29 | 2 | 111 | 0 | 0 | 113 | 0 | 144 | 10 | 0 | 154 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 9 | 0 | 25 | 4 | 116 | 0 | 0 | 120 | 0 | 126 | 9 | 0 | 135 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 108 | 0 | 43 | 0 | 151 | 15 | 451 | 0 | 0 | 466 | 0 | 532 | 32 | 0 | 564 |
| 0900 - 0915 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 18 | 3 | 83 | 0 | 0 | 86 | 0 | 126 | 9 | 0 | 135 |
| 0915 - 0930 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 7 | 0 | 16 | 4 | 85 | 0 | 0 | 89 | 0 | 92 | 5 | 0 | 97 |
| 0930 - 0945 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 | 0 | 15 | 3 | 65 | 0 | 0 | 68 | 0 | 93 | 6 | 0 | 99 |
| 0945 - 1000 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 14 | 0 | 20 | 4 | 79 | 0 | 0 | 83 | 0 | 111 | 6 | 0 | 117 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 38 | 0 | 69 | 14 | 312 | 0 | 0 | 326 | 0 | 422 | 26 | 0 | 448 |
| 1000 - 1015 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 8 | 5 | 75 | 0 | 0 | 80 | 0 | 110 | 6 | 0 | 116 |
| 1015 - 1030 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 10 | 0 | 22 | 2 | 81 | 0 | 0 | 83 | 0 | 92 | 8 | 0 | 100 |
| 1030 - 1045 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 7 | 0 | 19 | 6 | 68 | 0 | 0 | 74 | 0 | 105 | 5 | 0 | 110 |
| 1045 - 1100 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 13 | 0 | 18 | 7 | 81 | 0 | 0 | 88 | 0 | 94 | 2 | 0 | 96 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 32 | 0 | 67 | 20 | 305 | 0 | 0 | 325 | 0 | 401 | 21 | 0 | 422 |
| 1100 - 1115 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 8 | 0 | 14 | 6 | 81 | 0 | 0 | 87 | 0 | 101 | 3 | 0 | 104 |
| 1115 - 1130 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 1 | 0 | 12 | 6 | 75 | 0 | 0 | 81 | 0 | 96 | 6 | 0 | 102 |
| 1130 - 1145 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 7 | 4 | 102 | 0 | 0 | 106 | 0 | 93 | 10 | 0 | 103 |
| 1145 - 1200 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 13 | 0 | 24 | 15 | 105 | 0 | 0 | 120 | 0 | 109 | 11 | 0 | 120 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 25 | 0 | 57 | 31 | 363 | 0 | 0 | 394 | 0 | 399 | 30 | 0 | 429 |
| 1200 - 1215 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 12 | 0 | 20 | 7 | 92 | 0 | 0 | 99 | 0 | 81 | 9 | 0 | 90 |
| 1215 - 1230 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 10 | 0 | 16 | 11 | 84 | 0 | 0 | 95 | 0 | 102 | 11 | 0 | 113 |
| 1230 - 1245 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 8 | 0 | 13 | 6 | 94 | 0 | 0 | 100 | 0 | 93 | 14 | 0 | 107 |
| 1245 - 1300 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 6 | 0 | 15 | 5 | 100 | 0 | 0 | 105 | 0 | 84 | 7 | 0 | 91 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 36 | 0 | 64 | 29 | 370 | 0 | 0 | 399 | 0 | 360 | 41 | 0 | 401 |
| 1300 - 1315 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 13 | 0 | 24 | 9 | 101 | 0 | 0 | 110 | 0 | 91 | 5 | 0 | 96 |
| 1315 - 1330 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 10 | 0 | 16 | 7 | 98 | 0 | 0 | 105 | 0 | 117 | 11 | 0 | 128 |
| 1330 - 1345 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 1 | 0 | 12 | 15 | 105 | 0 | 0 | 120 | 0 | 94 | 11 | 0 | 105 |
| 1345 - 1400 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 10 | 0 | 18 | 12 | 90 | 0 | 0 | 102 | 0 | 91 | 12 | 0 | 103 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 34 | 0 | 70 | 43 | 394 | 0 | 0 | 437 | 0 | 393 | 39 | 0 | 432 |
| 1400 - 1415 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 9 | 0 | 17 | 10 | 93 | 0 | 0 | 103 | 0 | 96 | 7 | 0 | 103 |
| 1415 - 1430 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 10 | 0 | 15 | 7 | 117 | 0 | 0 | 124 | 0 | 90 | 5 | 0 | 95 |
| 1430 - 1445 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 0 | 9 | 17 | 114 | 0 | 0 | 131 | 0 | 101 | 11 | 0 | 112 |
| 1445 - 1500 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 3 | 0 | 13 | 5 | 137 | 0 | 0 | 142 | 0 | 86 | 10 | 0 | 96 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 54 | 39 | 461 | 0 | 0 | 500 | 0 | 373 | 33 | 0 | 406 |
| 1500 - 1515 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 | 0 | 15 | 8 | 110 | 0 | 0 | 118 | 0 | 114 | 12 | 0 | 126 |
| 1515 - 1530 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 0 | 15 | 8 | 125 | 0 | 0 | 133 | 0 | 113 | 19 | 0 | 132 |
| 1530 - 1545 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 0 | 15 | 10 | 137 | 0 | 0 | 147 | 0 | 129 | 26 | 0 | 155 |
| 1545 - 1600 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 6 | 0 | 16 | 15 | 148 | 0 | 0 | 163 | 0 | 129 | 11 | 0 | 140 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 24 | 0 | 61 | 41 | 520 | 0 | 0 | 561 | 0 | 485 | 68 | 0 | 553 |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 14 | 21 | 144 | 0 | 0 | 165 | 0 | 127 | 16 | 0 | 143 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 10 | 0 | 19 | 12 | 155 | 0 | 0 | 167 | 0 | 143 | 16 | 0 | 159 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 18 | 21 | 144 | 0 | 0 | 165 | 0 | 166 | 22 | 0 | 188 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 18 | 14 | 149 | 0 | 0 | 163 | 0 | 156 | 28 | 0 | 184 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 31 | 0 | 69 | 68 | 592 | 0 | 0 | 660 | 0 | 592 | 82 | 0 | 674 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 7 | 0 | 19 | 17 | 122 | 0 | 0 | 139 | 0 | 136 | 15 | 0 | 151 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 11 | 0 | 24 | 18 | 141 | 0 | 0 | 159 | 0 | 158 | 22 | 0 | 180 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 18 | 0 | 29 | 15 | 131 | 0 | 0 | 146 | 0 | 145 | 27 | 0 | 172 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 13 | 0 | 28 | 12 | 133 | 0 | 0 | 145 | 0 | 158 | 23 | 0 | 181 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 49 | 0 | 100 | 62 | 527 | 0 | 0 | 589 | 0 | 597 | 87 | 0 | 684 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 636 | 0 | 426 | 0 | 1062 | 379 | 4930 | 0 | 0 | 5309 | 0 | 5431 | 502 | 0 | 5933 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 59.89 | 0.00 | 40.11 | 0.00 | - | 7.14 | 92.86 | 0.00 | 0.00 | - | 0.00 | 91.54 | 8.46 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.17 | 0.00 | 3.46 | 0.00 | 8.63 | 3.08 | 40.07 | 0.00 | 0.00 | 43.15 | 0.00 | 44.14 | 4.08 | 0.00 | 48.22 |

Canton, GA
Classified Turn Movement Count

Site 4 of 23
Local Access
Ranchwood Trail
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.139169°, -84.463459°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 1800 (Weekday 12h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound Local Access | | | | | Southbound Ranchwood Trail | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | |
|----------------|----------------------------|------|-------|--------|-------|-------------------------------|------|-------|--------|-------|-----------------------------------|-------|-------|--------|-------|-----------------------------------|-------|-------|--------|-------|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App |
| | 4.1 | 4.2 | 4.3 | 4.4 | Total | 4.5 | 4.6 | 4.7 | 4.8 | Total | 4.9 | 4.10 | 4.11 | 4.12 | Total | 4.13 | 4.14 | 4.15 | 4.16 | Total |
| 0600 - 0615 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 8 | 0 | 21 | 1 | 30 | 0 | 0 | 31 | 0 | 52 | 0 | 0 | 52 |
| 0615 - 0630 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 4 | 0 | 20 | 0 | 47 | 0 | 0 | 47 | 0 | 82 | 0 | 0 | 82 |
| 0630 - 0645 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 18 | 0 | 44 | 0 | 64 | 0 | 0 | 64 | 0 | 108 | 3 | 0 | 111 |
| 0645 - 0700 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 11 | 0 | 43 | 1 | 77 | 0 | 0 | 78 | 0 | 130 | 5 | 0 | 135 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 41 | 0 | 128 | 2 | 218 | 0 | 0 | 220 | 0 | 372 | 8 | 0 | 380 |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 12 | 0 | 37 | 2 | 90 | 0 | 0 | 92 | 0 | 99 | 5 | 0 | 104 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 9 | 0 | 36 | 4 | 88 | 0 | 0 | 92 | 0 | 126 | 6 | 0 | 132 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 9 | 0 | 37 | 1 | 103 | 0 | 0 | 104 | 0 | 140 | 14 | 0 | 154 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 12 | 0 | 53 | 5 | 114 | 0 | 0 | 119 | 0 | 127 | 8 | 0 | 135 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 121 | 0 | 42 | 0 | 163 | 12 | 395 | 0 | 0 | 407 | 0 | 492 | 33 | 0 | 525 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 10 | 0 | 45 | 4 | 110 | 0 | 0 | 114 | 0 | 114 | 6 | 0 | 120 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 10 | 0 | 50 | 4 | 100 | 0 | 0 | 104 | 0 | 147 | 7 | 0 | 154 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 13 | 0 | 29 | 2 | 105 | 0 | 0 | 107 | 0 | 142 | 10 | 0 | 152 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 9 | 0 | 24 | 4 | 109 | 0 | 0 | 113 | 0 | 121 | 8 | 0 | 129 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 106 | 0 | 42 | 0 | 148 | 14 | 424 | 0 | 0 | 438 | 0 | 524 | 31 | 0 | 555 |
| 0900 - 0915 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 9 | 0 | 16 | 3 | 79 | 0 | 0 | 82 | 0 | 123 | 9 | 0 | 132 |
| 0915 - 0930 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 7 | 0 | 16 | 4 | 78 | 0 | 0 | 82 | 0 | 91 | 5 | 0 | 96 |
| 0930 - 0945 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 8 | 0 | 14 | 3 | 60 | 0 | 0 | 63 | 0 | 88 | 5 | 0 | 93 |
| 0945 - 1000 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 13 | 0 | 19 | 4 | 74 | 0 | 0 | 78 | 0 | 109 | 6 | 0 | 115 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 37 | 0 | 65 | 14 | 291 | 0 | 0 | 305 | 0 | 411 | 25 | 0 | 436 |
| 1000 - 1015 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 8 | 5 | 73 | 0 | 0 | 78 | 0 | 110 | 6 | 0 | 116 |
| 1015 - 1030 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 10 | 0 | 22 | 2 | 79 | 0 | 0 | 81 | 0 | 89 | 7 | 0 | 96 |
| 1030 - 1045 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 7 | 0 | 18 | 5 | 66 | 0 | 0 | 71 | 0 | 103 | 3 | 0 | 106 |
| 1045 - 1100 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 12 | 0 | 17 | 7 | 80 | 0 | 0 | 87 | 0 | 94 | 2 | 0 | 96 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 31 | 0 | 65 | 19 | 298 | 0 | 0 | 317 | 0 | 396 | 18 | 0 | 414 |
| 1100 - 1115 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 8 | 0 | 14 | 6 | 80 | 0 | 0 | 86 | 0 | 99 | 3 | 0 | 102 |
| 1115 - 1130 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 11 | 5 | 73 | 0 | 0 | 78 | 0 | 93 | 6 | 0 | 99 |
| 1130 - 1145 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 7 | 3 | 100 | 0 | 0 | 103 | 0 | 89 | 10 | 0 | 99 |
| 1145 - 1200 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 11 | 0 | 21 | 15 | 102 | 0 | 0 | 117 | 0 | 107 | 11 | 0 | 118 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 23 | 0 | 53 | 29 | 355 | 0 | 0 | 384 | 0 | 388 | 30 | 0 | 418 |
| 1200 - 1215 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 12 | 0 | 20 | 7 | 90 | 0 | 0 | 97 | 0 | 80 | 8 | 0 | 88 |
| 1215 - 1230 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 10 | 0 | 16 | 11 | 82 | 0 | 0 | 93 | 0 | 97 | 11 | 0 | 108 |
| 1230 - 1245 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 12 | 6 | 94 | 0 | 0 | 100 | 0 | 92 | 14 | 0 | 106 |
| 1245 - 1300 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 6 | 0 | 15 | 5 | 100 | 0 | 0 | 105 | 0 | 84 | 6 | 0 | 90 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 36 | 0 | 63 | 29 | 366 | 0 | 0 | 395 | 0 | 353 | 39 | 0 | 392 |
| 1300 - 1315 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 13 | 0 | 24 | 9 | 100 | 0 | 0 | 109 | 0 | 89 | 5 | 0 | 94 |
| 1315 - 1330 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 10 | 0 | 16 | 7 | 96 | 0 | 0 | 103 | 0 | 113 | 10 | 0 | 123 |
| 1330 - 1345 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 11 | 15 | 100 | 0 | 0 | 115 | 0 | 91 | 10 | 0 | 101 |
| 1345 - 1400 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 8 | 0 | 13 | 11 | 89 | 0 | 0 | 100 | 0 | 90 | 12 | 0 | 102 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 32 | 0 | 64 | 42 | 385 | 0 | 0 | 427 | 0 | 383 | 37 | 0 | 420 |
| 1400 - 1415 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 14 | 10 | 90 | 0 | 0 | 100 | 0 | 93 | 7 | 0 | 100 |
| 1415 - 1430 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 9 | 0 | 14 | 7 | 113 | 0 | 0 | 120 | 0 | 85 | 5 | 0 | 90 |
| 1430 - 1445 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 8 | 16 | 108 | 0 | 0 | 124 | 0 | 98 | 11 | 0 | 109 |
| 1445 - 1500 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 3 | 0 | 12 | 5 | 133 | 0 | 0 | 138 | 0 | 82 | 9 | 0 | 91 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 24 | 0 | 48 | 38 | 444 | 0 | 0 | 482 | 0 | 358 | 32 | 0 | 390 |
| 1500 - 1515 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 | 0 | 15 | 8 | 106 | 0 | 0 | 114 | 0 | 109 | 12 | 0 | 121 |
| 1515 - 1530 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 0 | 14 | 7 | 118 | 0 | 0 | 125 | 0 | 108 | 19 | 0 | 127 |
| 1530 - 1545 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 4 | 0 | 14 | 10 | 135 | 0 | 0 | 145 | 0 | 123 | 22 | 0 | 145 |
| 1545 - 1600 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 14 | 15 | 145 | 0 | 0 | 160 | 0 | 124 | 11 | 0 | 135 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 23 | 0 | 57 | 40 | 504 | 0 | 0 | 544 | 0 | 464 | 64 | 0 | 528 |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 14 | 21 | 143 | 0 | 0 | 164 | 0 | 124 | 15 | 0 | 139 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 18 | 12 | 151 | 0 | 0 | 163 | 0 | 143 | 15 | 0 | 158 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 8 | 0 | 17 | 20 | 142 | 0 | 0 | 162 | 0 | 161 | 21 | 0 | 182 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 18 | 14 | 146 | 0 | 0 | 160 | 0 | 154 | 24 | 0 | 178 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 29 | 0 | 67 | 67 | 582 | 0 | 0 | 649 | 0 | 582 | 75 | 0 | 657 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 18 | 17 | 121 | 0 | 0 | 138 | 0 | 134 | 14 | 0 | 148 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 9 | 0 | 22 | 18 | 140 | 0 | 0 | 158 | 0 | 154 | 21 | 0 | 175 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 16 | 0 | 27 | 15 | 130 | 0 | 0 | 145 | 0 | 144 | 27 | 0 | 171 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 13 | 0 | 28 | 12 | 131 | 0 | 0 | 143 | 0 | 154 | 23 | 0 | 177 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 44 | 0 | 95 | 62 | 522 | 0 | 0 | 584 | 0 | 586 | 85 | 0 | 671 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 612 | 0 | 404 | 0 | 1016 | 368 | 4784 | 0 | 0 | 5152 | 0 | 5309 | 477 | 0 | 5786 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 60.24 | 0.00 | 39.76 | 0.00 | - | 7.14 | 92.86 | 0.00 | 0.00 | - | 0.00 | 91.76 | 8.24 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.12 | 0.00 | 3.38 | 0.00 | 8.50 | 3.08 | 40.02 | 0.00 | 0.00 | 43.10 | 0.00 | 44.41 | 3.99 | 0.00 | 48.40 |

Canton, GA
Classified Turn Movement Count

Site 4 of 23
Local Access
Ranchwood Trail
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.139169°, -84.463459°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

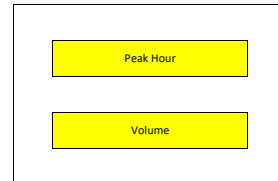
0600 - 1800 (Weekday 12h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound Local Access | | | | | Southbound Ranchwood Trail | | | | | Eastbound E Cherokee Dr (West) | | | | | Westbound E Cherokee Dr (East) | | | | | |
|----------------|----------------------------|------|-------|--------|-------|-------------------------------|------|-------|--------|-------|-----------------------------------|-------|-------|--------|-------|-----------------------------------|-------|-------|--------|-------|---|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | |
| | 4.1 | 4.2 | 4.3 | 4.4 | Total | 4.5 | 4.6 | 4.7 | 4.8 | Total | 4.9 | 4.10 | 4.11 | 4.12 | Total | 4.13 | 4.14 | 4.15 | 4.16 | Total | |
| 0600 - 0615 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 0615 - 0630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0630 - 0645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0645 - 0700 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 1 | 5 | 0 | 0 | 6 | 0 | 3 | 1 | 0 | 4 | |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 3 | |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 2 | |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 4 | |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 2 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 2 | 17 | 0 | 0 | 19 | 0 | 10 | 1 | 0 | 11 | |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 1 | |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 2 | |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 7 | 0 | 5 | 1 | 0 | 6 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 1 | 27 | 0 | 0 | 28 | 0 | 8 | 1 | 0 | 9 | |
| 0900 - 0915 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | |
| 0915 - 0930 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 1 | |
| 0930 - 0945 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 6 | |
| 0945 - 1000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 2 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 4 | 0 | 21 | 0 | 0 | 21 | 0 | 11 | 1 | 0 | 12 | |
| 1000 - 1015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | |
| 1015 - 1030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 1 | 0 | 4 | |
| 1030 - 1045 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 2 | 2 | 0 | 4 | |
| 1045 - 1100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 7 | 0 | 0 | 8 | 0 | 5 | 3 | 0 | 8 | |
| 1100 - 1115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | |
| 1115 - 1130 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | |
| 1130 - 1145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 | |
| 1145 - 1200 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 2 | 8 | 0 | 0 | 10 | 0 | 11 | 0 | 0 | 11 | |
| 1200 - 1215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | |
| 1215 - 1230 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 5 | |
| 1230 - 1245 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| 1245 - 1300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 7 | 2 | 0 | 9 | |
| 1300 - 1315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | |
| 1315 - 1330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 1 | 0 | 5 | |
| 1330 - 1345 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 3 | 1 | 0 | 4 | |
| 1345 - 1400 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 5 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 6 | 1 | 9 | 0 | 0 | 10 | 0 | 10 | 2 | 0 | 12 | |
| 1400 - 1415 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | |
| 1415 - 1430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 5 | 0 | 0 | 5 | |
| 1430 - 1445 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 6 | 0 | 0 | 7 | 0 | 3 | 0 | 0 | 3 | |
| 1445 - 1500 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 4 | 1 | 0 | 5 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 1 | 17 | 0 | 0 | 18 | 0 | 15 | 1 | 0 | 16 | |
| 1500 - 1515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 5 | 0 | 0 | 5 | |
| 1515 - 1530 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 7 | 0 | 0 | 8 | 0 | 5 | 0 | 0 | 5 | |
| 1530 - 1545 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 4 | 0 | 10 | |
| 1545 - 1600 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 5 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 4 | 1 | 16 | 0 | 0 | 17 | 0 | 21 | 4 | 0 | 25 | |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 4 | |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 5 | 1 | 0 | 6 | |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 4 | 0 | 6 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 10 | 0 | 0 | 11 | 0 | 10 | 7 | 0 | 17 | |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 3 | |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 5 | |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 5 | 0 | 0 | 5 | 0 | 11 | 2 | 0 | 13 | |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 22 | 0 | 46 | 11 | 146 | 0 | 0 | 157 | 0 | 122 | 25 | 0 | 147 | |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 52.17 | 0.00 | 47.83 | 0.00 | - | 7.01 | 92.99 | 0.00 | 0.00 | - | 0.00 | 82.99 | 17.01 | 0.00 | - | |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.86 | 0.00 | 6.29 | 0.00 | 13.14 | 3.14 | 41.71 | 0.00 | 0.00 | 44.86 | 0.00 | 34.86 | 7.14 | 0.00 | 42.00 | |

Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---|
| Thursday, February 13, 2020 | |
| Period | - 1800 (Weekday 12h Session) (13-02-20) |
| Peak Hour | 1630 - 1730 |



Canton, GA
Classified Turn Movement Count

Site 5 of 23

Village Ct
Little Brook Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.139276°, -84.461411°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 0700 - 0715 | 3 | 0 | 9 | 0 | 12 | 4 | 0 | 5 | 0 | 9 | 1 | 115 | 2 | 0 | 118 | 2 | 100 | 0 | 0 | 102 |
| 0715 - 0730 | 9 | 1 | 10 | 0 | 20 | 4 | 0 | 3 | 0 | 7 | 0 | 120 | 1 | 0 | 121 | 1 | 121 | 0 | 0 | 122 |
| 0730 - 0745 | 6 | 0 | 8 | 0 | 14 | 2 | 0 | 7 | 0 | 9 | 0 | 135 | 3 | 0 | 138 | 4 | 147 | 3 | 0 | 154 |
| 0745 - 0800 | 4 | 0 | 9 | 0 | 13 | 1 | 0 | 3 | 0 | 4 | 0 | 157 | 2 | 0 | 159 | 1 | 130 | 1 | 0 | 132 |
| Hourly Total | 22 | 1 | 36 | 0 | 59 | 11 | 0 | 18 | 0 | 29 | 1 | 527 | 8 | 0 | 536 | 8 | 498 | 4 | 0 | 510 |
| 0800 - 0815 | 5 | 0 | 5 | 0 | 10 | 1 | 0 | 3 | 0 | 4 | 1 | 147 | 2 | 0 | 150 | 0 | 115 | 0 | 0 | 115 |
| 0815 - 0830 | 3 | 0 | 1 | 0 | 4 | 1 | 0 | 3 | 0 | 4 | 1 | 146 | 3 | 0 | 150 | 1 | 148 | 1 | 0 | 150 |
| 0830 - 0845 | 10 | 0 | 8 | 0 | 18 | 2 | 0 | 3 | 0 | 5 | 0 | 130 | 0 | 0 | 130 | 0 | 139 | 1 | 0 | 140 |
| 0845 - 0900 | 3 | 0 | 1 | 0 | 4 | 3 | 0 | 1 | 0 | 4 | 0 | 127 | 4 | 0 | 131 | 3 | 131 | 0 | 0 | 134 |
| Hourly Total | 21 | 0 | 15 | 0 | 36 | 7 | 0 | 10 | 0 | 17 | 2 | 550 | 9 | 0 | 561 | 4 | 533 | 2 | 0 | 539 |
| Grand Total | 43 | 1 | 51 | 0 | 95 | 18 | 0 | 28 | 0 | 46 | 3 | 1077 | 17 | 0 | 1097 | 12 | 1031 | 6 | 0 | 1049 |
| Approach % | 45.26 | 1.05 | 53.68 | 0.00 | - | 39.13 | 0.00 | 60.87 | 0.00 | - | 0.27 | 98.18 | 1.55 | 0.00 | - | 1.14 | 98.28 | 0.57 | 0.00 | - |
| Intersection % | 1.88 | 0.04 | 2.23 | 0.00 | 4.15 | 0.79 | 0.00 | 1.22 | 0.00 | 2.01 | 0.13 | 47.09 | 0.74 | 0.00 | 47.97 | 0.52 | 45.08 | 0.26 | 0.00 | 45.87 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 1600 - 1615 | 3 | 0 | 1 | 0 | 4 | 0 | 0 | 2 | 0 | 2 | 3 | 151 | 4 | 0 | 158 | 3 | 121 | 2 | 0 | 126 |
| 1615 - 1630 | 2 | 0 | 4 | 0 | 6 | 0 | 0 | 2 | 0 | 2 | 5 | 127 | 11 | 0 | 143 | 3 | 155 | 3 | 0 | 161 |
| 1630 - 1645 | 3 | 1 | 2 | 0 | 6 | 1 | 0 | 1 | 0 | 2 | 7 | 167 | 13 | 0 | 187 | 5 | 180 | 1 | 0 | 186 |
| 1645 - 1700 | 9 | 0 | 1 | 0 | 10 | 2 | 0 | 3 | 0 | 5 | 4 | 134 | 9 | 0 | 147 | 7 | 129 | 1 | 0 | 137 |
| Hourly Total | 17 | 1 | 8 | 0 | 26 | 3 | 0 | 8 | 0 | 11 | 19 | 579 | 37 | 0 | 635 | 18 | 585 | 7 | 0 | 610 |
| 1700 - 1715 | 10 | 0 | 3 | 0 | 13 | 0 | 0 | 2 | 0 | 2 | 3 | 135 | 10 | 0 | 148 | 4 | 180 | 2 | 0 | 186 |
| 1715 - 1730 | 5 | 1 | 3 | 0 | 9 | 0 | 0 | 1 | 0 | 1 | 5 | 141 | 5 | 0 | 151 | 5 | 160 | 1 | 0 | 166 |
| 1730 - 1745 | 4 | 0 | 2 | 0 | 6 | 2 | 0 | 1 | 0 | 3 | 2 | 131 | 9 | 0 | 142 | 3 | 197 | 1 | 0 | 201 |
| 1745 - 1800 | 6 | 0 | 1 | 0 | 7 | 1 | 0 | 1 | 0 | 2 | 5 | 122 | 8 | 0 | 135 | 5 | 171 | 3 | 0 | 179 |
| Hourly Total | 25 | 1 | 9 | 0 | 35 | 3 | 0 | 5 | 0 | 8 | 15 | 529 | 32 | 0 | 576 | 17 | 708 | 7 | 0 | 732 |
| Grand Total | 42 | 2 | 17 | 0 | 61 | 6 | 0 | 13 | 0 | 19 | 34 | 1108 | 69 | 0 | 1211 | 35 | 1293 | 14 | 0 | 1342 |
| Approach % | 68.85 | 3.28 | 27.87 | 0.00 | - | 31.58 | 0.00 | 68.42 | 0.00 | - | 2.81 | 91.49 | 5.70 | 0.00 | - | 2.61 | 96.35 | 1.04 | 0.00 | - |
| Intersection % | 1.60 | 0.08 | 0.65 | 0.00 | 2.32 | 0.23 | 0.00 | 0.49 | 0.00 | 0.72 | 1.29 | 42.08 | 2.62 | 0.00 | 45.99 | 1.33 | 49.11 | 0.53 | 0.00 | 50.97 |

Canton, GA
Classified Turn Movement Count

Site 5 of 23

Village Ct
Little Brook Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.139276°, -84.461411°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 0700 - 0715 | 3 | 0 | 9 | 0 | 12 | 4 | 0 | 3 | 0 | 7 | 1 | 109 | 1 | 0 | 111 | 2 | 99 | 0 | 0 | 101 |
| 0715 - 0730 | 9 | 1 | 10 | 0 | 20 | 4 | 0 | 3 | 0 | 7 | 0 | 115 | 1 | 0 | 116 | 0 | 119 | 0 | 0 | 119 |
| 0730 - 0745 | 5 | 0 | 8 | 0 | 13 | 2 | 0 | 6 | 0 | 8 | 0 | 132 | 3 | 0 | 135 | 4 | 146 | 1 | 0 | 151 |
| 0745 - 0800 | 3 | 0 | 9 | 0 | 12 | 1 | 0 | 3 | 0 | 4 | 0 | 152 | 2 | 0 | 154 | 1 | 128 | 1 | 0 | 130 |
| Hourly Total | 20 | 1 | 36 | 0 | 57 | 11 | 0 | 15 | 0 | 26 | 1 | 508 | 7 | 0 | 516 | 7 | 492 | 2 | 0 | 501 |
| 0800 - 0815 | 5 | 0 | 5 | 0 | 10 | 1 | 0 | 3 | 0 | 4 | 1 | 142 | 1 | 0 | 144 | 0 | 114 | 0 | 0 | 114 |
| 0815 - 0830 | 3 | 0 | 1 | 0 | 4 | 1 | 0 | 3 | 0 | 4 | 0 | 137 | 3 | 0 | 140 | 1 | 148 | 1 | 0 | 150 |
| 0830 - 0845 | 10 | 0 | 8 | 0 | 18 | 2 | 0 | 2 | 0 | 4 | 0 | 122 | 0 | 0 | 122 | 0 | 138 | 1 | 0 | 139 |
| 0845 - 0900 | 2 | 0 | 1 | 0 | 3 | 3 | 0 | 1 | 0 | 4 | 0 | 122 | 4 | 0 | 126 | 3 | 126 | 0 | 0 | 129 |
| Hourly Total | 20 | 0 | 15 | 0 | 35 | 7 | 0 | 9 | 0 | 16 | 1 | 523 | 8 | 0 | 532 | 4 | 526 | 2 | 0 | 532 |
| Grand Total | 40 | 1 | 51 | 0 | 92 | 18 | 0 | 24 | 0 | 42 | 2 | 1031 | 15 | 0 | 1048 | 11 | 1018 | 4 | 0 | 1033 |
| Approach % | 43.48 | 1.09 | 55.43 | 0.00 | - | 42.86 | 0.00 | 57.14 | 0.00 | - | 0.19 | 98.38 | 1.43 | 0.00 | - | 1.06 | 98.55 | 0.39 | 0.00 | - |
| Intersection % | 1.81 | 0.05 | 2.30 | 0.00 | 4.15 | 0.81 | 0.00 | 1.08 | 0.00 | 1.90 | 0.09 | 46.55 | 0.68 | 0.00 | 47.31 | 0.50 | 45.96 | 0.18 | 0.00 | 46.64 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 1600 - 1615 | 3 | 0 | 1 | 0 | 4 | 0 | 0 | 2 | 0 | 2 | 3 | 149 | 4 | 0 | 156 | 3 | 119 | 2 | 0 | 124 |
| 1615 - 1630 | 2 | 0 | 3 | 0 | 5 | 0 | 0 | 2 | 0 | 2 | 5 | 126 | 10 | 0 | 141 | 2 | 150 | 3 | 0 | 155 |
| 1630 - 1645 | 3 | 1 | 1 | 0 | 5 | 1 | 0 | 1 | 0 | 2 | 6 | 165 | 13 | 0 | 184 | 5 | 176 | 1 | 0 | 182 |
| 1645 - 1700 | 9 | 0 | 1 | 0 | 10 | 2 | 0 | 3 | 0 | 5 | 4 | 131 | 9 | 0 | 144 | 7 | 124 | 1 | 0 | 132 |
| Hourly Total | 17 | 1 | 6 | 0 | 24 | 3 | 0 | 8 | 0 | 11 | 18 | 571 | 36 | 0 | 625 | 17 | 569 | 7 | 0 | 593 |
| 1700 - 1715 | 10 | 0 | 3 | 0 | 13 | 0 | 0 | 1 | 0 | 1 | 3 | 134 | 10 | 0 | 147 | 4 | 175 | 1 | 0 | 180 |
| 1715 - 1730 | 5 | 1 | 3 | 0 | 9 | 0 | 0 | 1 | 0 | 1 | 5 | 140 | 5 | 0 | 150 | 5 | 159 | 1 | 0 | 165 |
| 1730 - 1745 | 4 | 0 | 2 | 0 | 6 | 2 | 0 | 0 | 0 | 2 | 2 | 130 | 8 | 0 | 140 | 3 | 195 | 1 | 0 | 199 |
| 1745 - 1800 | 6 | 0 | 1 | 0 | 7 | 1 | 0 | 1 | 0 | 2 | 5 | 121 | 8 | 0 | 134 | 5 | 167 | 2 | 0 | 174 |
| Hourly Total | 25 | 1 | 9 | 0 | 35 | 3 | 0 | 3 | 0 | 6 | 15 | 525 | 31 | 0 | 571 | 17 | 696 | 5 | 0 | 718 |
| Grand Total | 42 | 2 | 15 | 0 | 59 | 6 | 0 | 11 | 0 | 17 | 33 | 1096 | 67 | 0 | 1196 | 34 | 1265 | 12 | 0 | 1311 |
| Approach % | 71.19 | 3.39 | 25.42 | 0.00 | - | 35.29 | 0.00 | 64.71 | 0.00 | - | 2.76 | 91.64 | 5.60 | 0.00 | - | 2.59 | 96.49 | 0.92 | 0.00 | - |
| Intersection % | 1.63 | 0.08 | 0.58 | 0.00 | 2.28 | 0.23 | 0.00 | 0.43 | 0.00 | 0.66 | 1.28 | 42.43 | 2.59 | 0.00 | 46.30 | 1.32 | 48.97 | 0.46 | 0.00 | 50.75 |

Canton, GA
 Classified Turn Movement Count

Site 5 of 23

Village Ct
 Little Brook Dr
 E Cherokee Dr (West)
 E Cherokee Dr (East)

Lat/Long
 34.139276°, -84.461411°

Date
 Thursday, February 13, 2020

Weather
 Mostly Cloudy
 60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
 Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 6 | 1 | 0 | 7 | 0 | 1 | 0 | 0 | 1 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | 3 |
| 0730 - 0745 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 2 | 0 | 3 |
| 0745 - 0800 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 2 |
| Hourly Total | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 19 | 1 | 0 | 20 | 1 | 6 | 2 | 0 | 9 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 6 | 0 | 1 | 0 | 0 | 1 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 1 |
| 0845 - 0900 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 27 | 1 | 0 | 29 | 0 | 7 | 0 | 0 | 7 |
| Grand Total | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 4 | 1 | 46 | 2 | 0 | 49 | 1 | 13 | 2 | 0 | 16 |
| Approach % | 100.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 2.04 | 93.88 | 4.08 | 0.00 | - | 6.25 | 81.25 | 12.50 | 0.00 | - |
| Intersection % | 4.17 | 0.00 | 0.00 | 0.00 | 4.17 | 0.00 | 0.00 | 5.56 | 0.00 | 5.56 | 1.39 | 63.89 | 2.78 | 0.00 | 68.06 | 1.39 | 18.06 | 2.78 | 0.00 | 22.22 |

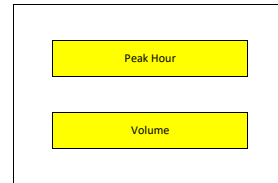
1600 - 1800 (Weekday 2h Session) (13-02-2020)
 Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------|-------------|--------------|---------------|--------------|-----------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Village Ct | | | | | Little Brook Dr | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 5.1 | Thru 5.2 | Right 5.3 | U-Turn 5.4 | App Total | Left 5.5 | Thru 5.6 | Right 5.7 | U-Turn 5.8 | App Total | Left 5.9 | Thru 5.10 | Right 5.11 | U-Turn 5.12 | App Total | Left 5.13 | Thru 5.14 | Right 5.15 | U-Turn 5.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 |
| 1615 - 1630 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 5 | 0 | 0 | 6 |
| 1630 - 1645 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 1 | 0 | 10 | 1 | 16 | 0 | 0 | 17 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 1 | 0 | 6 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 2 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 5 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 0 | 5 | 0 | 12 | 2 | 0 | 14 |
| Grand Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 1 | 12 | 2 | 0 | 15 | 1 | 28 | 2 | 0 | 31 |
| Approach % | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 6.67 | 80.00 | 13.33 | 0.00 | - | 3.23 | 90.32 | 6.45 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 4.00 | 0.00 | 4.00 | 0.00 | 0.00 | 4.00 | 0.00 | 4.00 | 2.00 | 24.00 | 4.00 | 0.00 | 30.00 | 2.00 | 56.00 | 4.00 | 0.00 | 62.00 |

Canton, GA
Peak Hour Turning Movement Count



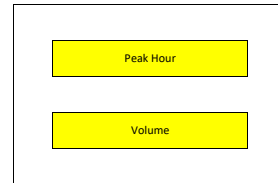
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1630 - 1730 |



Canton, GA
Classified Turn Movement Count

Site 6 of 23

Avery Creek Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.143913°, -84.449862°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound Avery Creek Dr | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|
| | Left | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Thru | Right | U-Turn | App Total |
| | 6.1 | 6.2 | 6.3 | | 6.4 | 6.5 | 6.6 | | 6.7 | 6.8 | 6.9 | |
| 0700 - 0715 | 25 | 11 | 0 | 36 | 0 | 103 | 0 | 103 | 119 | 2 | 0 | 121 |
| 0715 - 0730 | 18 | 14 | 0 | 32 | 1 | 112 | 0 | 113 | 125 | 2 | 0 | 127 |
| 0730 - 0745 | 6 | 14 | 0 | 20 | 1 | 95 | 0 | 96 | 152 | 6 | 0 | 158 |
| 0745 - 0800 | 24 | 13 | 0 | 37 | 4 | 129 | 0 | 133 | 147 | 2 | 0 | 149 |
| Hourly Total | 73 | 52 | 0 | 125 | 6 | 439 | 0 | 445 | 543 | 12 | 0 | 555 |
| 0800 - 0815 | 7 | 9 | 0 | 16 | 1 | 130 | 0 | 131 | 117 | 4 | 0 | 121 |
| 0815 - 0830 | 11 | 11 | 0 | 22 | 2 | 109 | 0 | 111 | 164 | 5 | 0 | 169 |
| 0830 - 0845 | 14 | 11 | 0 | 25 | 6 | 133 | 0 | 139 | 141 | 5 | 0 | 146 |
| 0845 - 0900 | 17 | 7 | 0 | 24 | 4 | 110 | 0 | 114 | 139 | 5 | 0 | 144 |
| Hourly Total | 49 | 38 | 0 | 87 | 13 | 482 | 0 | 495 | 561 | 19 | 0 | 580 |
| Grand Total | 122 | 90 | 0 | 212 | 19 | 921 | 0 | 940 | 1104 | 31 | 0 | 1135 |
| Approach % | 57.55 | 42.45 | 0.00 | - | 2.02 | 97.98 | 0.00 | - | 97.27 | 2.73 | 0.00 | - |
| Intersection % | 5.33 | 3.94 | 0.00 | 9.27 | 0.83 | 40.27 | 0.00 | 41.10 | 48.27 | 1.36 | 0.00 | 49.63 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound Avery Creek Dr | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|
| | Left | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Thru | Right | U-Turn | App Total |
| | 6.1 | 6.2 | 6.3 | | 6.4 | 6.5 | 6.6 | | 6.7 | 6.8 | 6.9 | |
| 1600 - 1615 | 6 | 9 | 0 | 15 | 16 | 134 | 0 | 150 | 110 | 7 | 0 | 117 |
| 1615 - 1630 | 5 | 13 | 0 | 18 | 16 | 114 | 0 | 130 | 130 | 17 | 0 | 147 |
| 1630 - 1645 | 2 | 8 | 0 | 10 | 5 | 156 | 0 | 161 | 143 | 11 | 0 | 154 |
| 1645 - 1700 | 9 | 8 | 0 | 17 | 15 | 124 | 0 | 139 | 107 | 14 | 0 | 121 |
| Hourly Total | 22 | 38 | 0 | 60 | 52 | 528 | 0 | 580 | 490 | 49 | 0 | 539 |
| 1700 - 1715 | 6 | 5 | 0 | 11 | 18 | 135 | 0 | 153 | 153 | 16 | 0 | 169 |
| 1715 - 1730 | 12 | 13 | 0 | 25 | 14 | 144 | 0 | 158 | 129 | 7 | 0 | 136 |
| 1730 - 1745 | 1 | 9 | 0 | 10 | 13 | 148 | 0 | 161 | 159 | 17 | 0 | 176 |
| 1745 - 1800 | 9 | 16 | 0 | 25 | 9 | 119 | 0 | 128 | 124 | 17 | 0 | 141 |
| Hourly Total | 28 | 43 | 0 | 71 | 54 | 546 | 0 | 600 | 565 | 57 | 0 | 622 |
| Grand Total | 50 | 81 | 0 | 131 | 106 | 1074 | 0 | 1180 | 1055 | 106 | 0 | 1161 |
| Approach % | 38.17 | 61.83 | 0.00 | - | 8.98 | 91.02 | 0.00 | - | 90.87 | 9.13 | 0.00 | - |
| Intersection % | 2.02 | 3.28 | 0.00 | 5.30 | 4.29 | 43.45 | 0.00 | 47.73 | 42.68 | 4.29 | 0.00 | 46.97 |

Canton, GA
Classified Turn Movement Count

Site 6 of 23

Avery Creek Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.143913°, -84.449862°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|----------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|----------------------|--------------|---------------|--------------|
| | Avery Creek Dr | | | | E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| | Left 6.1 | Right 6.2 | U-Turn 6.3 | App Total | Left 6.4 | Thru 6.5 | U-Turn 6.6 | App Total | Thru 6.7 | Right 6.8 | U-Turn 6.9 | App Total |
| 0700 - 0715 | 25 | 11 | 0 | 36 | 0 | 98 | 0 | 98 | 118 | 1 | 0 | 119 |
| 0715 - 0730 | 17 | 14 | 0 | 31 | 1 | 108 | 0 | 109 | 122 | 2 | 0 | 124 |
| 0730 - 0745 | 6 | 14 | 0 | 20 | 1 | 90 | 0 | 91 | 148 | 6 | 0 | 154 |
| 0745 - 0800 | 24 | 13 | 0 | 37 | 4 | 127 | 0 | 131 | 144 | 2 | 0 | 146 |
| Hourly Total | 72 | 52 | 0 | 124 | 6 | 423 | 0 | 429 | 532 | 11 | 0 | 543 |
| 0800 - 0815 | 7 | 9 | 0 | 16 | 1 | 123 | 0 | 124 | 115 | 3 | 0 | 118 |
| 0815 - 0830 | 11 | 11 | 0 | 22 | 2 | 103 | 0 | 105 | 163 | 4 | 0 | 167 |
| 0830 - 0845 | 12 | 11 | 0 | 23 | 6 | 126 | 0 | 132 | 139 | 5 | 0 | 144 |
| 0845 - 0900 | 17 | 7 | 0 | 24 | 4 | 105 | 0 | 109 | 136 | 4 | 0 | 140 |
| Hourly Total | 47 | 38 | 0 | 85 | 13 | 457 | 0 | 470 | 553 | 16 | 0 | 569 |
| Grand Total | 119 | 90 | 0 | 209 | 19 | 880 | 0 | 899 | 1085 | 27 | 0 | 1112 |
| Approach % | 56.94 | 43.06 | 0.00 | - | 2.11 | 97.89 | 0.00 | - | 97.57 | 2.43 | 0.00 | - |
| Intersection % | 5.36 | 4.05 | 0.00 | 9.41 | 0.86 | 39.64 | 0.00 | 40.50 | 48.87 | 1.22 | 0.00 | 50.09 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|----------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|----------------------|--------------|---------------|--------------|
| | Avery Creek Dr | | | | E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| | Left 6.1 | Right 6.2 | U-Turn 6.3 | App Total | Left 6.4 | Thru 6.5 | U-Turn 6.6 | App Total | Thru 6.7 | Right 6.8 | U-Turn 6.9 | App Total |
| 1600 - 1615 | 6 | 8 | 0 | 14 | 15 | 132 | 0 | 147 | 108 | 7 | 0 | 115 |
| 1615 - 1630 | 5 | 13 | 0 | 18 | 15 | 111 | 0 | 126 | 126 | 16 | 0 | 142 |
| 1630 - 1645 | 2 | 8 | 0 | 10 | 5 | 155 | 0 | 160 | 138 | 10 | 0 | 148 |
| 1645 - 1700 | 8 | 8 | 0 | 16 | 15 | 122 | 0 | 137 | 104 | 14 | 0 | 118 |
| Hourly Total | 21 | 37 | 0 | 58 | 50 | 520 | 0 | 570 | 476 | 47 | 0 | 523 |
| 1700 - 1715 | 6 | 4 | 0 | 10 | 18 | 133 | 0 | 151 | 152 | 16 | 0 | 168 |
| 1715 - 1730 | 12 | 12 | 0 | 24 | 13 | 143 | 0 | 156 | 128 | 7 | 0 | 135 |
| 1730 - 1745 | 1 | 9 | 0 | 10 | 13 | 148 | 0 | 161 | 155 | 17 | 0 | 172 |
| 1745 - 1800 | 9 | 16 | 0 | 25 | 9 | 118 | 0 | 127 | 120 | 17 | 0 | 137 |
| Hourly Total | 28 | 41 | 0 | 69 | 53 | 542 | 0 | 595 | 555 | 57 | 0 | 612 |
| Grand Total | 49 | 78 | 0 | 127 | 103 | 1062 | 0 | 1165 | 1031 | 104 | 0 | 1135 |
| Approach % | 38.58 | 61.42 | 0.00 | - | 8.84 | 91.16 | 0.00 | - | 90.84 | 9.16 | 0.00 | - |
| Intersection % | 2.02 | 3.21 | 0.00 | 5.23 | 4.24 | 43.76 | 0.00 | 48.00 | 42.48 | 4.29 | 0.00 | 46.77 |

Canton, GA
Classified Turn Movement Count

Site 6 of 23

Avery Creek Dr
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.143913°, -84.449862°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound Avery Creek Dr | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|------------------------------|--------------|---------------|--------------|-----------------------------------|-------------|---------------|--------------|-----------------------------------|--------------|---------------|--------------|
| | Left 6.1 | Right 6.2 | U-Turn 6.3 | App Total | Left 6.4 | Thru 6.5 | U-Turn 6.6 | App Total | Thru 6.7 | Right 6.8 | U-Turn 6.9 | App Total |
| | 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 1 | 1 | 0 |
| 0715 - 0730 | 1 | 0 | 0 | 1 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 3 |
| Hourly Total | 1 | 0 | 0 | 1 | 0 | 16 | 0 | 16 | 11 | 1 | 0 | 12 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 2 | 1 | 0 | 3 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 1 | 1 | 0 | 2 |
| 0830 - 0845 | 2 | 0 | 0 | 2 | 0 | 7 | 0 | 7 | 2 | 0 | 0 | 2 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 3 | 1 | 0 | 4 |
| Hourly Total | 2 | 0 | 0 | 2 | 0 | 25 | 0 | 25 | 8 | 3 | 0 | 11 |
| Grand Total | 3 | 0 | 0 | 3 | 0 | 41 | 0 | 41 | 19 | 4 | 0 | 23 |
| Approach % | 100.00 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | - | 82.61 | 17.39 | 0.00 | - |
| Intersection % | 4.48 | 0.00 | 0.00 | 4.48 | 0.00 | 61.19 | 0.00 | 61.19 | 28.36 | 5.97 | 0.00 | 34.33 |

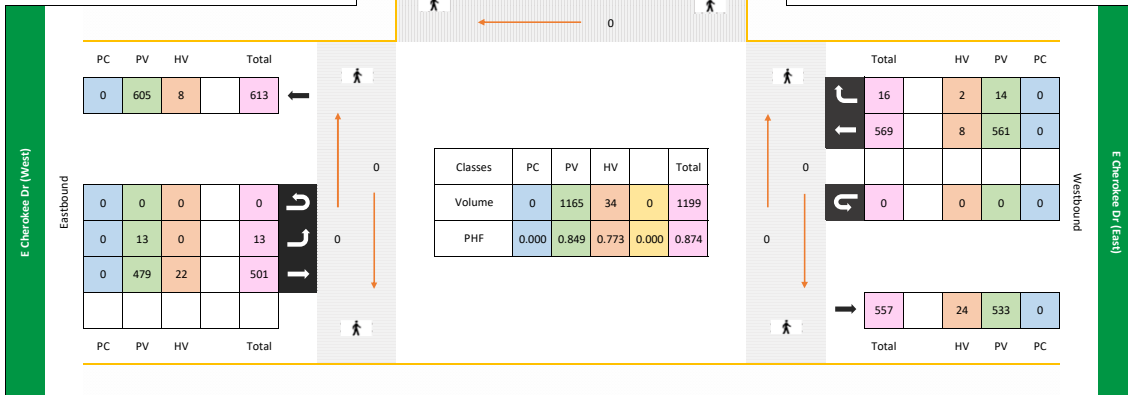
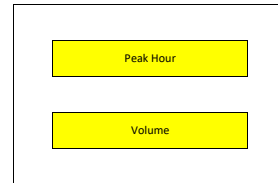
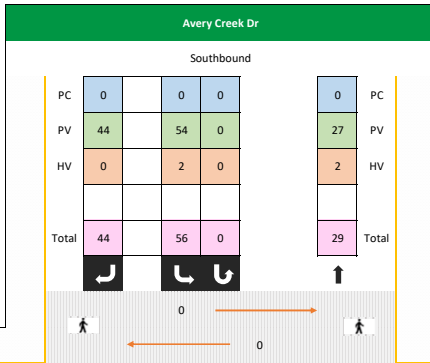
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound Avery Creek Dr | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|------------------------------|--------------|---------------|--------------|-----------------------------------|-------------|---------------|--------------|-----------------------------------|--------------|---------------|--------------|
| | Left 6.1 | Right 6.2 | U-Turn 6.3 | App Total | Left 6.4 | Thru 6.5 | U-Turn 6.6 | App Total | Thru 6.7 | Right 6.8 | U-Turn 6.9 | App Total |
| | 1600 - 1615 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 3 | 2 | 0 | 0 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 4 | 1 | 0 | 5 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 1 | 0 | 6 |
| 1645 - 1700 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 3 |
| Hourly Total | 1 | 1 | 0 | 2 | 2 | 8 | 0 | 10 | 14 | 2 | 0 | 16 |
| 1700 - 1715 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 |
| 1715 - 1730 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 2 | 0 | 2 | 1 | 4 | 0 | 5 | 10 | 0 | 0 | 10 |
| Grand Total | 1 | 3 | 0 | 4 | 3 | 12 | 0 | 15 | 24 | 2 | 0 | 26 |
| Approach % | 25.00 | 75.00 | 0.00 | - | 20.00 | 80.00 | 0.00 | - | 92.31 | 7.69 | 0.00 | - |
| Intersection % | 2.22 | 6.67 | 0.00 | 8.89 | 6.67 | 26.67 | 0.00 | 33.33 | 53.33 | 4.44 | 0.00 | 57.78 |

Canton, GA
Peak Hour Turning Movement Count



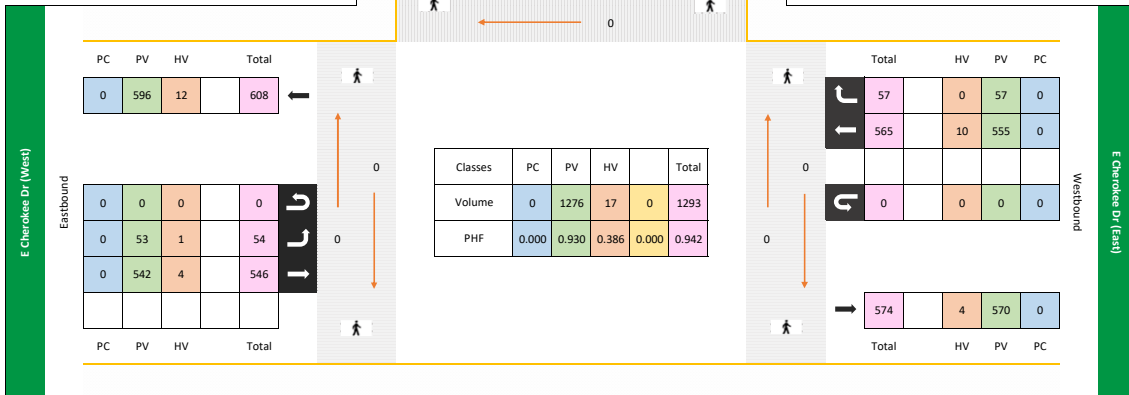
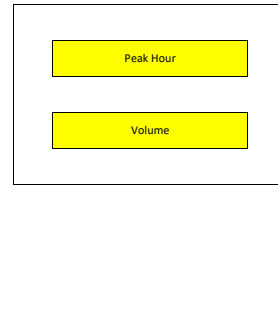
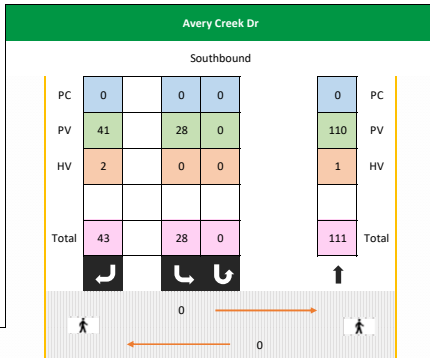
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0745 - 0845 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 7 of 23
Newcastle Walk

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.145441°, -84.446547°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| Northbound | | | | |
|----------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 0700 - 0715 | 5 | 3 | 0 | 8 |
| 0715 - 0730 | 6 | 1 | 0 | 7 |
| 0730 - 0745 | 8 | 5 | 0 | 13 |
| 0745 - 0800 | 4 | 1 | 0 | 5 |
| Hourly Total | 23 | 10 | 0 | 33 |
| 0800 - 0815 | 4 | 1 | 0 | 5 |
| 0815 - 0830 | 3 | 4 | 0 | 7 |
| 0830 - 0845 | 8 | 3 | 0 | 11 |
| 0845 - 0900 | 3 | 5 | 0 | 8 |
| Hourly Total | 18 | 13 | 0 | 31 |
| Grand Total | 41 | 23 | 0 | 64 |
| Approach % | 64.06 | 35.94 | 0.00 | - |
| Intersection % | 1.86 | 1.05 | 0.00 | 2.91 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 123 | 0 | 0 | 123 | 0 | 117 | 0 | 117 |
| 132 | 1 | 0 | 133 | 0 | 122 | 0 | 122 |
| 103 | 0 | 0 | 103 | 1 | 147 | 0 | 148 |
| 145 | 1 | 0 | 146 | 1 | 147 | 0 | 148 |
| 503 | 2 | 0 | 505 | 2 | 533 | 0 | 535 |
| 136 | 3 | 0 | 139 | 0 | 113 | 0 | 113 |
| 116 | 1 | 0 | 117 | 1 | 169 | 0 | 170 |
| 148 | 4 | 0 | 152 | 0 | 135 | 0 | 135 |
| 122 | 3 | 0 | 125 | 2 | 143 | 0 | 145 |
| 522 | 11 | 0 | 533 | 3 | 560 | 0 | 563 |
| 1025 | 13 | 0 | 1038 | 5 | 1093 | 0 | 1098 |
| 98.75 | 1.25 | 0.00 | - | 0.46 | 99.54 | 0.00 | - |
| 46.59 | 0.59 | 0.00 | 47.18 | 0.23 | 49.68 | 0.00 | 49.91 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| Northbound | | | | |
|----------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 1600 - 1615 | 2 | 3 | 0 | 5 |
| 1615 - 1630 | 2 | 2 | 0 | 4 |
| 1630 - 1645 | 4 | 2 | 0 | 6 |
| 1645 - 1700 | 2 | 0 | 0 | 2 |
| Hourly Total | 10 | 7 | 0 | 17 |
| 1700 - 1715 | 1 | 1 | 0 | 2 |
| 1715 - 1730 | 4 | 5 | 0 | 9 |
| 1730 - 1745 | 2 | 1 | 0 | 3 |
| 1745 - 1800 | 0 | 4 | 0 | 4 |
| Hourly Total | 7 | 11 | 0 | 18 |
| Grand Total | 17 | 18 | 0 | 35 |
| Approach % | 48.57 | 51.43 | 0.00 | - |
| Intersection % | 0.73 | 0.78 | 0.00 | 1.51 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 142 | 4 | 0 | 146 | 3 | 115 | 0 | 118 |
| 117 | 2 | 0 | 119 | 1 | 148 | 0 | 149 |
| 147 | 3 | 0 | 150 | 4 | 151 | 0 | 155 |
| 128 | 2 | 0 | 130 | 0 | 125 | 0 | 125 |
| 534 | 11 | 0 | 545 | 8 | 539 | 0 | 547 |
| 142 | 5 | 0 | 147 | 0 | 163 | 0 | 163 |
| 152 | 3 | 0 | 155 | 3 | 135 | 0 | 138 |
| 138 | 3 | 0 | 141 | 3 | 174 | 0 | 177 |
| 132 | 1 | 0 | 133 | 2 | 139 | 0 | 141 |
| 564 | 12 | 0 | 576 | 8 | 611 | 0 | 619 |
| 1098 | 23 | 0 | 1121 | 16 | 1150 | 0 | 1166 |
| 97.95 | 2.05 | 0.00 | - | 1.37 | 98.63 | 0.00 | - |
| 47.29 | 0.99 | 0.00 | 48.28 | 0.69 | 49.53 | 0.00 | 50.22 |

Canton, GA
Classified Turn Movement Count

Site 7 of 23
Newcastle Walk

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.145441°, -84.446547°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| Northbound | | | | |
|----------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 0700 - 0715 | 5 | 3 | 0 | 8 |
| 0715 - 0730 | 6 | 0 | 0 | 6 |
| 0730 - 0745 | 8 | 3 | 0 | 11 |
| 0745 - 0800 | 3 | 1 | 0 | 4 |
| Hourly Total | 22 | 7 | 0 | 29 |
| 0800 - 0815 | 4 | 1 | 0 | 5 |
| 0815 - 0830 | 3 | 3 | 0 | 6 |
| 0830 - 0845 | 8 | 3 | 0 | 11 |
| 0845 - 0900 | 3 | 4 | 0 | 7 |
| Hourly Total | 18 | 11 | 0 | 29 |
| Grand Total | 40 | 18 | 0 | 58 |
| Approach % | 68.97 | 31.03 | 0.00 | - |
| Intersection % | 1.88 | 0.85 | 0.00 | 2.73 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 119 | 0 | 0 | 119 | 0 | 115 | 0 | 115 |
| 127 | 0 | 0 | 127 | 0 | 119 | 0 | 119 |
| 98 | 0 | 0 | 98 | 0 | 143 | 0 | 143 |
| 143 | 1 | 0 | 144 | 1 | 145 | 0 | 146 |
| 487 | 1 | 0 | 488 | 1 | 522 | 0 | 523 |
| 128 | 3 | 0 | 131 | 0 | 111 | 0 | 111 |
| 112 | 0 | 0 | 112 | 1 | 166 | 0 | 167 |
| 140 | 4 | 0 | 144 | 0 | 133 | 0 | 133 |
| 116 | 3 | 0 | 119 | 2 | 139 | 0 | 141 |
| 496 | 10 | 0 | 506 | 3 | 549 | 0 | 552 |
| 983 | 11 | 0 | 994 | 4 | 1071 | 0 | 1075 |
| 98.89 | 1.11 | 0.00 | - | 0.37 | 99.63 | 0.00 | - |
| 46.22 | 0.52 | 0.00 | 46.73 | 0.19 | 50.35 | 0.00 | 50.54 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| Northbound | | | | |
|----------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 1600 - 1615 | 2 | 3 | 0 | 5 |
| 1615 - 1630 | 2 | 2 | 0 | 4 |
| 1630 - 1645 | 4 | 1 | 0 | 5 |
| 1645 - 1700 | 2 | 0 | 0 | 2 |
| Hourly Total | 10 | 6 | 0 | 16 |
| 1700 - 1715 | 1 | 1 | 0 | 2 |
| 1715 - 1730 | 4 | 5 | 0 | 9 |
| 1730 - 1745 | 2 | 1 | 0 | 3 |
| 1745 - 1800 | 0 | 4 | 0 | 4 |
| Hourly Total | 7 | 11 | 0 | 18 |
| Grand Total | 17 | 17 | 0 | 34 |
| Approach % | 50.00 | 50.00 | 0.00 | - |
| Intersection % | 0.74 | 0.74 | 0.00 | 1.49 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 140 | 4 | 0 | 144 | 3 | 110 | 0 | 113 |
| 115 | 1 | 0 | 116 | 1 | 143 | 0 | 144 |
| 145 | 3 | 0 | 148 | 4 | 147 | 0 | 151 |
| 126 | 2 | 0 | 128 | 0 | 123 | 0 | 123 |
| 526 | 10 | 0 | 536 | 8 | 523 | 0 | 531 |
| 141 | 5 | 0 | 146 | 0 | 159 | 0 | 159 |
| 151 | 3 | 0 | 154 | 3 | 134 | 0 | 137 |
| 137 | 3 | 0 | 140 | 3 | 172 | 0 | 175 |
| 131 | 1 | 0 | 132 | 2 | 136 | 0 | 138 |
| 560 | 12 | 0 | 572 | 8 | 601 | 0 | 609 |
| 1086 | 22 | 0 | 1108 | 16 | 1124 | 0 | 1140 |
| 98.01 | 1.99 | 0.00 | - | 1.40 | 98.60 | 0.00 | - |
| 47.59 | 0.96 | 0.00 | 48.55 | 0.70 | 49.26 | 0.00 | 49.96 |

Canton, GA
Classified Turn Movement Count

Site 7 of 23
Newcastle Walk

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.145441°, -84.446547°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| Northbound | | | | |
|--------------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 1 | 0 | 1 |
| 0730 - 0745 | 0 | 2 | 0 | 2 |
| 0745 - 0800 | 1 | 0 | 0 | 1 |
| Hourly Total | 1 | 3 | 0 | 4 |
| 0800 - 0815 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 1 | 0 | 1 |
| 0830 - 0845 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 1 | 0 | 1 |
| Hourly Total | 0 | 2 | 0 | 2 |
| Grand Total | 1 | 5 | 0 | 6 |
| Approach % | 16.67 | 83.33 | 0.00 | - |
| Intersection % | 1.37 | 6.85 | 0.00 | 8.22 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 |
| 5 | 1 | 0 | 6 | 0 | 3 | 0 | 3 |
| 5 | 0 | 0 | 5 | 1 | 4 | 0 | 5 |
| 2 | 0 | 0 | 2 | 0 | 2 | 0 | 2 |
| 16 | 1 | 0 | 17 | 1 | 11 | 0 | 12 |
| 8 | 0 | 0 | 8 | 0 | 2 | 0 | 2 |
| 4 | 1 | 0 | 5 | 0 | 3 | 0 | 3 |
| 8 | 0 | 0 | 8 | 0 | 2 | 0 | 2 |
| 6 | 0 | 0 | 6 | 0 | 4 | 0 | 4 |
| 26 | 1 | 0 | 27 | 0 | 11 | 0 | 11 |
| 42 | 2 | 0 | 44 | 1 | 22 | 0 | 23 |
| 95.45 | 4.55 | 0.00 | - | 4.35 | 95.65 | 0.00 | - |
| 57.53 | 2.74 | 0.00 | 60.27 | 1.37 | 30.14 | 0.00 | 31.51 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

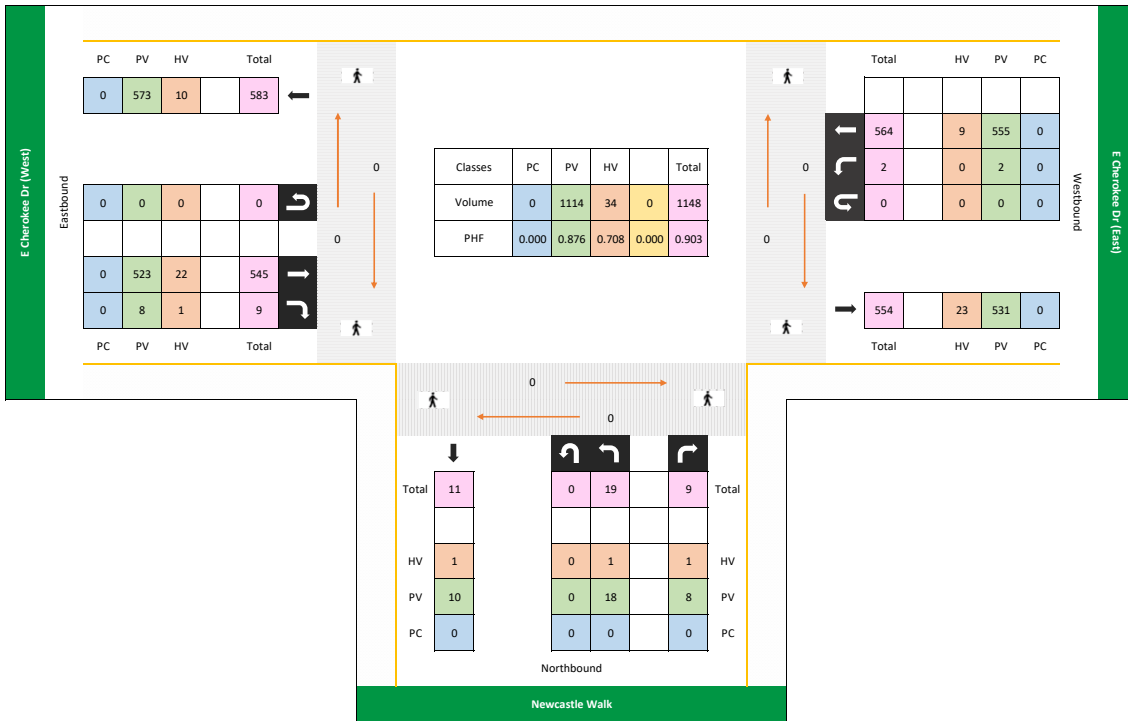
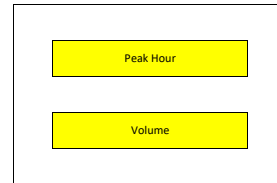
| Northbound | | | | |
|--------------------|-------------|--------------|---------------|--------------|
| Newcastle Walk | | | | |
| TIME | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 1 | 0 | 1 |
| 1645 - 1700 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 0 | 1 |
| 1700 - 1715 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 1 | 0 | 1 |
| Approach % | 0.00 | 100.00 | 0.00 | - |
| Intersection % | 0.00 | 2.50 | 0.00 | 2.50 |

| Eastbound | | | | Westbound | | | |
|----------------------|--------------|---------------|--------------|----------------------|-------------|---------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 7.4 | Right 7.5 | U-Turn 7.6 | App Total | Left 7.7 | Thru 7.8 | U-Turn 7.9 | App Total |
| 2 | 0 | 0 | 2 | 0 | 5 | 0 | 5 |
| 2 | 1 | 0 | 3 | 0 | 5 | 0 | 5 |
| 2 | 0 | 0 | 2 | 0 | 4 | 0 | 4 |
| 2 | 0 | 0 | 2 | 0 | 2 | 0 | 2 |
| 8 | 1 | 0 | 9 | 0 | 16 | 0 | 16 |
| 1 | 0 | 0 | 1 | 0 | 4 | 0 | 4 |
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 |
| 1 | 0 | 0 | 1 | 0 | 3 | 0 | 3 |
| 4 | 0 | 0 | 4 | 0 | 10 | 0 | 10 |
| 12 | 1 | 0 | 13 | 0 | 26 | 0 | 26 |
| 92.31 | 7.69 | 0.00 | - | 0.00 | 100.00 | 0.00 | - |
| 30.00 | 2.50 | 0.00 | 32.50 | 0.00 | 65.00 | 0.00 | 65.00 |

Canton, GA
Peak Hour Turning Movement Count



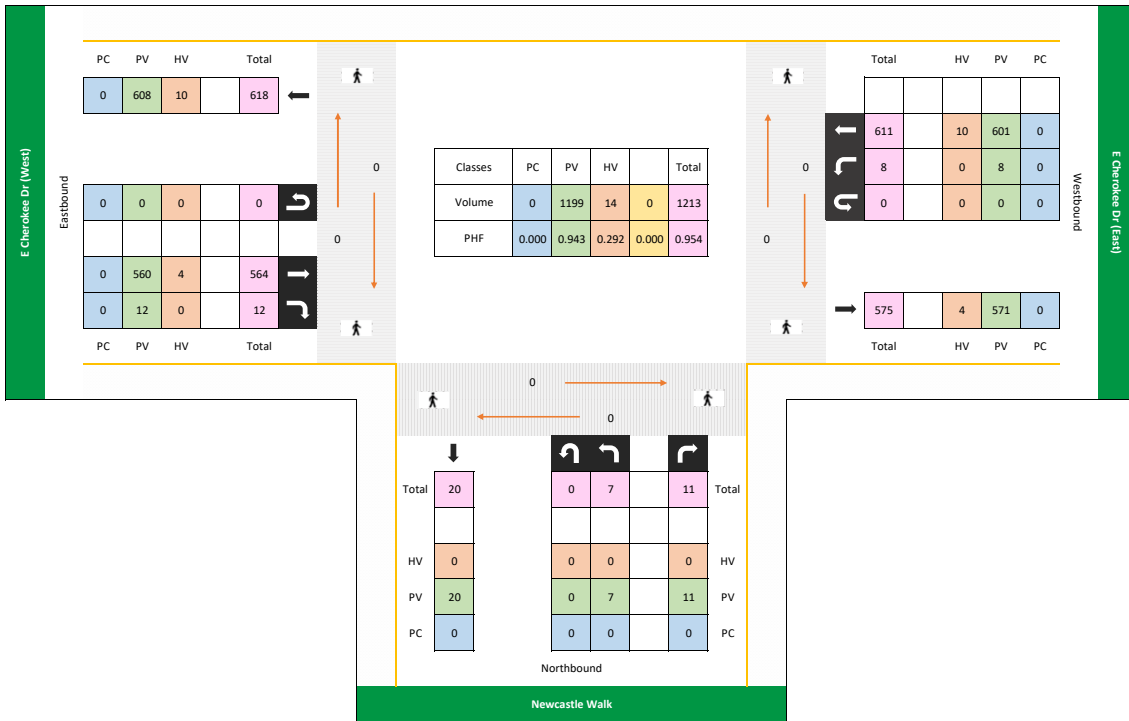
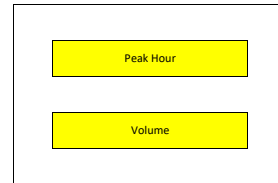
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0745 - 0845 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---|
| Thursday, February 13, 2020 | |
| Period | > - 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 8 of 23

Bradshaw Club Dr
E Cheokee Dr (West)
E Cheokee Dr (East)

Lat/Long
34.150813°, -84.441409°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|------------------|--------------|---------------|--------------|---------------------|-------------|---------------|--------------|---------------------|--------------|---------------|--------------|
| | Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total | Left 8.4 | Thru 8.5 | U-Turn 8.6 | App Total | Thru 8.7 | Right 8.8 | U-Turn 8.9 | App Total |
| 0700 - 0715 | 6 | 5 | 0 | 11 | 0 | 120 | 0 | 120 | 118 | 1 | 0 | 119 |
| 0715 - 0730 | 9 | 8 | 0 | 17 | 5 | 128 | 0 | 133 | 109 | 1 | 0 | 110 |
| 0730 - 0745 | 8 | 8 | 0 | 16 | 2 | 108 | 0 | 110 | 149 | 0 | 0 | 149 |
| 0745 - 0800 | 13 | 9 | 0 | 22 | 3 | 146 | 0 | 149 | 132 | 2 | 0 | 134 |
| Hourly Total | 36 | 30 | 0 | 66 | 10 | 502 | 0 | 512 | 508 | 4 | 0 | 512 |
| 0800 - 0815 | 8 | 9 | 1 | 18 | 3 | 131 | 0 | 134 | 117 | 2 | 0 | 119 |
| 0815 - 0830 | 5 | 19 | 0 | 24 | 2 | 122 | 0 | 124 | 141 | 2 | 0 | 143 |
| 0830 - 0845 | 9 | 5 | 0 | 14 | 3 | 138 | 0 | 141 | 126 | 1 | 0 | 127 |
| 0845 - 0900 | 7 | 5 | 0 | 12 | 3 | 133 | 0 | 136 | 137 | 5 | 0 | 142 |
| Hourly Total | 29 | 38 | 1 | 68 | 11 | 524 | 0 | 535 | 521 | 10 | 0 | 531 |
| Grand Total | 65 | 68 | 1 | 134 | 21 | 1026 | 0 | 1047 | 1029 | 14 | 0 | 1043 |
| Approach % | 48.51 | 50.75 | 0.75 | - | 2.01 | 97.99 | 0.00 | - | 98.66 | 1.34 | 0.00 | - |
| Intersection % | 2.92 | 3.06 | 0.04 | 6.03 | 0.94 | 46.13 | 0.00 | 47.08 | 46.27 | 0.63 | 0.00 | 46.90 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|------------------|--------------|---------------|--------------|---------------------|-------------|---------------|--------------|---------------------|--------------|---------------|--------------|
| | Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total | Left 8.4 | Thru 8.5 | U-Turn 8.6 | App Total | Thru 8.7 | Right 8.8 | U-Turn 8.9 | App Total |
| 1600 - 1615 | 9 | 5 | 0 | 14 | 13 | 132 | 0 | 145 | 108 | 10 | 0 | 118 |
| 1615 - 1630 | 13 | 6 | 0 | 19 | 7 | 108 | 0 | 115 | 148 | 9 | 0 | 157 |
| 1630 - 1645 | 7 | 10 | 0 | 17 | 12 | 142 | 0 | 154 | 149 | 6 | 0 | 155 |
| 1645 - 1700 | 4 | 4 | 0 | 8 | 6 | 124 | 0 | 130 | 120 | 8 | 1 | 129 |
| Hourly Total | 33 | 25 | 0 | 58 | 38 | 506 | 0 | 544 | 525 | 33 | 1 | 559 |
| 1700 - 1715 | 7 | 4 | 0 | 11 | 8 | 127 | 0 | 135 | 150 | 7 | 0 | 157 |
| 1715 - 1730 | 3 | 8 | 0 | 11 | 9 | 151 | 0 | 160 | 138 | 5 | 0 | 143 |
| 1730 - 1745 | 10 | 18 | 0 | 28 | 14 | 121 | 0 | 135 | 160 | 8 | 0 | 168 |
| 1745 - 1800 | 9 | 13 | 0 | 22 | 8 | 132 | 0 | 140 | 122 | 10 | 0 | 132 |
| Hourly Total | 29 | 43 | 0 | 72 | 39 | 531 | 0 | 570 | 570 | 30 | 0 | 600 |
| Grand Total | 62 | 68 | 0 | 130 | 77 | 1037 | 0 | 1114 | 1095 | 63 | 1 | 1159 |
| Approach % | 47.69 | 52.31 | 0.00 | - | 6.91 | 93.09 | 0.00 | - | 94.48 | 5.44 | 0.09 | - |
| Intersection % | 2.58 | 2.83 | 0.00 | 5.41 | 3.20 | 43.15 | 0.00 | 46.36 | 45.57 | 2.62 | 0.04 | 48.23 |

Canton, GA
Classified Turn Movement Count

Site 8 of 23

Bradshaw Club Dr
E Cheokee Dr (West)
E Cheokee Dr (East)

Lat/Long
34.150813°, -84.441409°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME |
|---------------------|
| 0700 - 0715 |
| 0715 - 0730 |
| 0730 - 0745 |
| 0745 - 0800 |
| Hourly Total |
| 0800 - 0815 |
| 0815 - 0830 |
| 0830 - 0845 |
| 0845 - 0900 |
| Hourly Total |
| Grand Total |
| Approach % |
| Intersection % |

| Southbound | | | | Eastbound | | | | Westbound | | | |
|------------------|-----------|----------|------------|---------------------|------------|----------|-------------|---------------------|-----------|----------|-------------|
| Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| Left | Right | U-Turn | App | Left | Thru | U-Turn | App | Thru | Right | U-Turn | App |
| 8.1 | 8.2 | 8.3 | Total | 8.4 | 8.5 | 8.6 | Total | 8.7 | 8.8 | 8.9 | Total |
| 6 | 5 | 0 | 11 | 0 | 116 | 0 | 116 | 116 | 1 | 0 | 117 |
| 8 | 8 | 0 | 16 | 3 | 122 | 0 | 125 | 106 | 0 | 0 | 106 |
| 7 | 6 | 0 | 13 | 2 | 105 | 0 | 107 | 146 | 0 | 0 | 146 |
| 13 | 9 | 0 | 22 | 3 | 142 | 0 | 145 | 130 | 2 | 0 | 132 |
| 34 | 28 | 0 | 62 | 8 | 485 | 0 | 493 | 498 | 3 | 0 | 501 |
| 8 | 9 | 1 | 18 | 3 | 127 | 0 | 130 | 114 | 2 | 0 | 116 |
| 5 | 18 | 0 | 23 | 1 | 116 | 0 | 117 | 140 | 2 | 0 | 142 |
| 9 | 4 | 0 | 13 | 3 | 128 | 0 | 131 | 125 | 1 | 0 | 126 |
| 7 | 5 | 0 | 12 | 3 | 126 | 0 | 129 | 133 | 5 | 0 | 138 |
| 29 | 36 | 1 | 66 | 10 | 497 | 0 | 507 | 512 | 10 | 0 | 522 |
| 63 | 64 | 1 | 128 | 18 | 982 | 0 | 1000 | 1010 | 13 | 0 | 1023 |
| 49.22 | 50.00 | 0.78 | - | 1.80 | 98.20 | 0.00 | - | 98.73 | 1.27 | 0.00 | - |
| 2.93 | 2.98 | 0.05 | 5.95 | 0.84 | 45.65 | 0.00 | 46.49 | 46.95 | 0.60 | 0.00 | 47.56 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME |
|---------------------|
| 1600 - 1615 |
| 1615 - 1630 |
| 1630 - 1645 |
| 1645 - 1700 |
| Hourly Total |
| 1700 - 1715 |
| 1715 - 1730 |
| 1730 - 1745 |
| 1745 - 1800 |
| Hourly Total |
| Grand Total |
| Approach % |
| Intersection % |

| Southbound | | | | Eastbound | | | | Westbound | | | |
|------------------|-----------|----------|------------|---------------------|-------------|----------|-------------|---------------------|-----------|----------|-------------|
| Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| Left | Right | U-Turn | App | Left | Thru | U-Turn | App | Thru | Right | U-Turn | App |
| 8.1 | 8.2 | 8.3 | Total | 8.4 | 8.5 | 8.6 | Total | 8.7 | 8.8 | 8.9 | Total |
| 9 | 5 | 0 | 14 | 13 | 130 | 0 | 143 | 105 | 10 | 0 | 115 |
| 13 | 5 | 0 | 18 | 7 | 107 | 0 | 114 | 143 | 9 | 0 | 152 |
| 6 | 10 | 0 | 16 | 11 | 140 | 0 | 151 | 145 | 6 | 0 | 151 |
| 4 | 4 | 0 | 8 | 6 | 121 | 0 | 127 | 117 | 8 | 1 | 126 |
| 32 | 24 | 0 | 56 | 37 | 498 | 0 | 535 | 510 | 33 | 1 | 544 |
| 7 | 3 | 0 | 10 | 8 | 125 | 0 | 133 | 149 | 7 | 0 | 156 |
| 3 | 8 | 0 | 11 | 9 | 150 | 0 | 159 | 137 | 5 | 0 | 142 |
| 10 | 18 | 0 | 28 | 14 | 121 | 0 | 135 | 157 | 8 | 0 | 165 |
| 9 | 13 | 0 | 22 | 8 | 131 | 0 | 139 | 118 | 10 | 0 | 128 |
| 29 | 42 | 0 | 71 | 39 | 527 | 0 | 566 | 561 | 30 | 0 | 591 |
| 61 | 66 | 0 | 127 | 76 | 1025 | 0 | 1101 | 1071 | 63 | 1 | 1135 |
| 48.03 | 51.97 | 0.00 | - | 6.90 | 93.10 | 0.00 | - | 94.36 | 5.55 | 0.09 | - |
| 2.58 | 2.79 | 0.00 | 5.37 | 3.22 | 43.38 | 0.00 | 46.59 | 45.32 | 2.67 | 0.04 | 48.03 |

Canton, GA
Classified Turn Movement Count

Site 8 of 23

Bradshaw Club Dr
E Cheokee Dr (West)
E Cheokee Dr (East)

Lat/Long
34.150813°, -84.441409°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|------------------|--------------|---------------|--------------|---------------------|-------------|---------------|--------------|---------------------|--------------|---------------|--------------|
| | Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total | Left 8.4 | Thru 8.5 | U-Turn 8.6 | App Total | Thru 8.7 | Right 8.8 | U-Turn 8.9 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 2 | 0 | 0 | 2 |
| 0715 - 0730 | 1 | 0 | 0 | 1 | 2 | 6 | 0 | 8 | 3 | 1 | 0 | 4 |
| 0730 - 0745 | 1 | 2 | 0 | 3 | 0 | 3 | 0 | 3 | 3 | 0 | 0 | 3 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 2 | 0 | 0 | 2 |
| Hourly Total | 2 | 2 | 0 | 4 | 2 | 17 | 0 | 19 | 10 | 1 | 0 | 11 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 |
| 0815 - 0830 | 0 | 1 | 0 | 1 | 1 | 6 | 0 | 7 | 1 | 0 | 0 | 1 |
| 0830 - 0845 | 0 | 1 | 0 | 1 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 1 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 2 | 0 | 2 | 1 | 27 | 0 | 28 | 9 | 0 | 0 | 9 |
| Grand Total | 2 | 4 | 0 | 6 | 3 | 44 | 0 | 47 | 19 | 1 | 0 | 20 |
| Approach % | 33.33 | 66.67 | 0.00 | - | 6.38 | 93.62 | 0.00 | - | 95.00 | 5.00 | 0.00 | - |
| Intersection % | 2.74 | 5.48 | 0.00 | 8.22 | 4.11 | 60.27 | 0.00 | 64.38 | 26.03 | 1.37 | 0.00 | 27.40 |

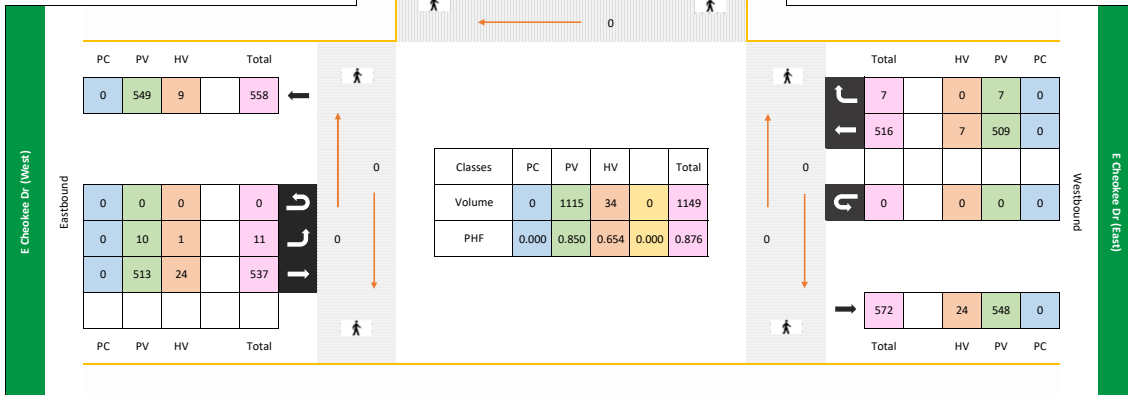
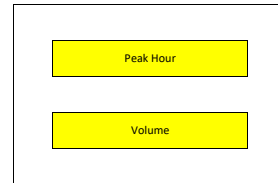
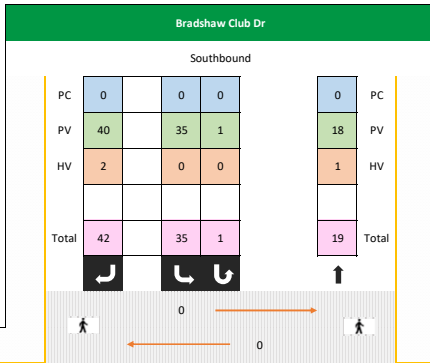
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|------------------|--------------|---------------|--------------|---------------------|-------------|---------------|--------------|---------------------|--------------|---------------|--------------|
| | Bradshaw Club Dr | | | | E Cheokee Dr (West) | | | | E Cheokee Dr (East) | | | |
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total | Left 8.4 | Thru 8.5 | U-Turn 8.6 | App Total | Thru 8.7 | Right 8.8 | U-Turn 8.9 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 3 |
| 1615 - 1630 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 5 | 0 | 0 | 5 |
| 1630 - 1645 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 3 | 4 | 0 | 0 | 4 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 0 | 0 | 3 |
| Hourly Total | 1 | 1 | 0 | 2 | 1 | 8 | 0 | 9 | 15 | 0 | 0 | 15 |
| 1700 - 1715 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 4 | 9 | 0 | 0 | 9 |
| Grand Total | 1 | 2 | 0 | 3 | 1 | 12 | 0 | 13 | 24 | 0 | 0 | 24 |
| Approach % | 33.33 | 66.67 | 0.00 | - | 7.69 | 92.31 | 0.00 | - | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 2.50 | 5.00 | 0.00 | 7.50 | 2.50 | 30.00 | 0.00 | 32.50 | 60.00 | 0.00 | 0.00 | 60.00 |

Canton, GA
Peak Hour Turning Movement Count



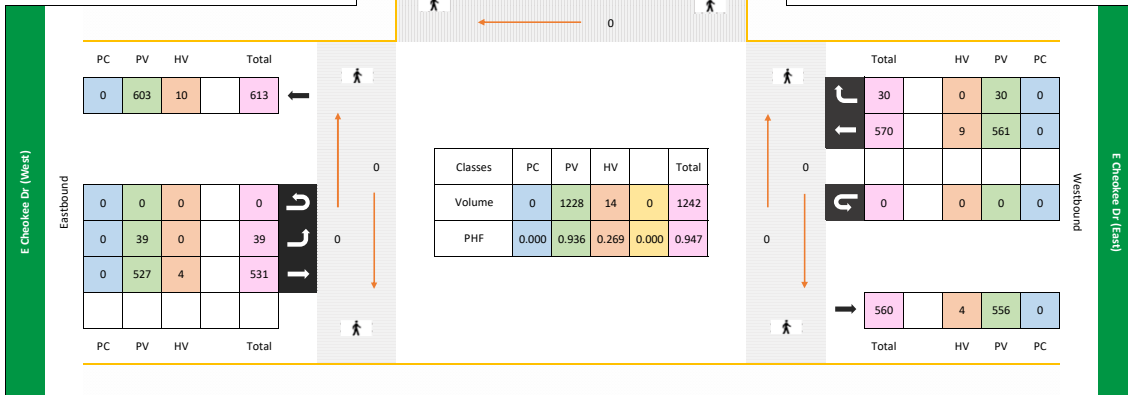
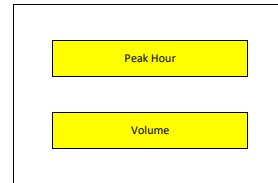
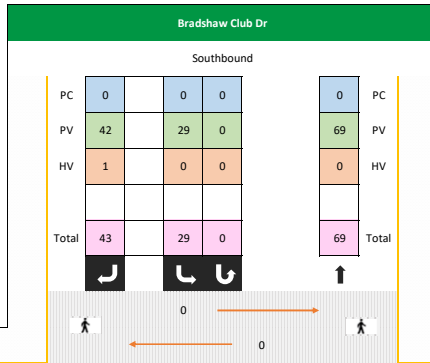
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0745 - 0845 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 9 of 23

Little Rd (South)
Little Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long

34.156937°, -84.430821°

Date

Thursday, February 13, 2020

Weather

Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 21 | 0 | 24 | 4 | 133 | 0 | 0 | 137 | 0 | 116 | 0 | 0 | 116 |
| 0715 - 0730 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 29 | 0 | 30 | 3 | 141 | 0 | 0 | 144 | 0 | 109 | 0 | 0 | 109 |
| 0730 - 0745 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 26 | 0 | 27 | 4 | 131 | 0 | 0 | 135 | 0 | 124 | 3 | 0 | 127 |
| 0745 - 0800 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 30 | 0 | 30 | 12 | 173 | 1 | 0 | 186 | 3 | 127 | 3 | 0 | 133 |
| Hourly Total | 2 | 0 | 6 | 0 | 8 | 5 | 0 | 106 | 0 | 111 | 23 | 578 | 1 | 0 | 602 | 3 | 476 | 6 | 0 | 485 |
| 0800 - 0815 | 1 | 0 | 2 | 0 | 3 | 1 | 0 | 19 | 0 | 20 | 6 | 154 | 0 | 0 | 160 | 1 | 117 | 1 | 0 | 119 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 0 | 21 | 8 | 134 | 0 | 0 | 142 | 0 | 135 | 1 | 0 | 136 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 0 | 17 | 2 | 149 | 2 | 0 | 153 | 0 | 127 | 2 | 0 | 129 |
| 0845 - 0900 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 18 | 0 | 19 | 6 | 155 | 1 | 0 | 162 | 0 | 125 | 0 | 0 | 125 |
| Hourly Total | 2 | 0 | 3 | 0 | 5 | 5 | 0 | 72 | 0 | 77 | 22 | 592 | 3 | 0 | 617 | 1 | 504 | 4 | 0 | 509 |
| Grand Total | 4 | 0 | 9 | 0 | 13 | 10 | 0 | 178 | 0 | 188 | 45 | 1170 | 4 | 0 | 1219 | 4 | 980 | 10 | 0 | 994 |
| Approach % | 30.77 | 0.00 | 69.23 | 0.00 | - | 5.32 | 0.00 | 94.68 | 0.00 | - | 3.69 | 95.98 | 0.33 | 0.00 | - | 0.40 | 98.59 | 1.01 | 0.00 | - |
| Intersection % | 0.17 | 0.00 | 0.37 | 0.00 | 0.54 | 0.41 | 0.00 | 7.37 | 0.00 | 7.79 | 1.86 | 48.47 | 0.17 | 0.00 | 50.50 | 0.17 | 40.60 | 0.41 | 0.00 | 41.18 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 6 | 140 | 1 | 0 | 147 | 1 | 124 | 0 | 0 | 125 |
| 1615 - 1630 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 8 | 0 | 8 | 8 | 129 | 2 | 0 | 139 | 1 | 167 | 0 | 0 | 168 |
| 1630 - 1645 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 14 | 0 | 14 | 11 | 152 | 1 | 0 | 164 | 0 | 140 | 0 | 0 | 140 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 14 | 12 | 144 | 0 | 0 | 156 | 2 | 151 | 2 | 0 | 155 |
| Hourly Total | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 46 | 0 | 47 | 37 | 565 | 4 | 0 | 606 | 4 | 582 | 2 | 0 | 588 |
| 1700 - 1715 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 11 | 0 | 11 | 10 | 142 | 1 | 0 | 153 | 0 | 154 | 2 | 0 | 156 |
| 1715 - 1730 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 10 | 0 | 10 | 10 | 163 | 0 | 0 | 173 | 0 | 156 | 2 | 0 | 158 |
| 1730 - 1745 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 13 | 0 | 13 | 18 | 141 | 0 | 0 | 159 | 0 | 145 | 0 | 0 | 145 |
| 1745 - 1800 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 16 | 0 | 17 | 16 | 141 | 1 | 0 | 158 | 0 | 128 | 0 | 0 | 128 |
| Hourly Total | 1 | 0 | 5 | 0 | 6 | 0 | 1 | 50 | 0 | 51 | 54 | 587 | 2 | 0 | 643 | 0 | 583 | 4 | 0 | 587 |
| Grand Total | 1 | 0 | 7 | 0 | 8 | 0 | 2 | 96 | 0 | 98 | 91 | 1152 | 6 | 0 | 1249 | 4 | 1165 | 6 | 0 | 1175 |
| Approach % | 12.50 | 0.00 | 87.50 | 0.00 | - | 0.00 | 2.04 | 97.96 | 0.00 | - | 7.29 | 92.23 | 0.48 | 0.00 | - | 0.34 | 99.15 | 0.51 | 0.00 | - |
| Intersection % | 0.04 | 0.00 | 0.28 | 0.00 | 0.32 | 0.00 | 0.08 | 3.79 | 0.00 | 3.87 | 3.60 | 45.53 | 0.24 | 0.00 | 49.37 | 0.16 | 46.05 | 0.24 | 0.00 | 46.44 |

Canton, GA
Classified Turn Movement Count

Site 9 of 23

Little Rd (South)
Little Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long

34.156937°, -84.430821°

Date

Thursday, February 13, 2020

Weather

Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)

Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 20 | 0 | 23 | 4 | 128 | 0 | 0 | 132 | 0 | 111 | 0 | 0 | 111 |
| 0715 - 0730 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 28 | 0 | 29 | 3 | 135 | 0 | 0 | 138 | 0 | 108 | 0 | 0 | 108 |
| 0730 - 0745 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 25 | 0 | 26 | 4 | 126 | 0 | 0 | 130 | 0 | 123 | 3 | 0 | 126 |
| 0745 - 0800 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 29 | 0 | 29 | 12 | 169 | 1 | 0 | 182 | 2 | 126 | 3 | 0 | 131 |
| Hourly Total | 2 | 0 | 6 | 0 | 8 | 5 | 0 | 102 | 0 | 107 | 23 | 558 | 1 | 0 | 582 | 2 | 468 | 6 | 0 | 476 |
| 0800 - 0815 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 19 | 0 | 20 | 6 | 149 | 0 | 0 | 155 | 1 | 112 | 1 | 0 | 114 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 0 | 21 | 8 | 128 | 0 | 0 | 136 | 0 | 135 | 1 | 0 | 136 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 0 | 17 | 2 | 140 | 2 | 0 | 144 | 0 | 126 | 2 | 0 | 128 |
| 0845 - 0900 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 18 | 0 | 19 | 6 | 147 | 1 | 0 | 154 | 0 | 121 | 0 | 0 | 121 |
| Hourly Total | 2 | 0 | 1 | 0 | 3 | 5 | 0 | 72 | 0 | 77 | 22 | 564 | 3 | 0 | 589 | 1 | 494 | 4 | 0 | 499 |
| Grand Total | 4 | 0 | 7 | 0 | 11 | 10 | 0 | 174 | 0 | 184 | 45 | 1122 | 4 | 0 | 1171 | 3 | 962 | 10 | 0 | 975 |
| Approach % | 36.36 | 0.00 | 63.64 | 0.00 | - | 5.43 | 0.00 | 94.57 | 0.00 | - | 3.84 | 95.82 | 0.34 | 0.00 | - | 0.31 | 98.67 | 1.03 | 0.00 | - |
| Intersection % | 0.17 | 0.00 | 0.30 | 0.00 | 0.47 | 0.43 | 0.00 | 7.43 | 0.00 | 7.86 | 1.92 | 47.93 | 0.17 | 0.00 | 50.02 | 0.13 | 41.09 | 0.43 | 0.00 | 41.65 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)

Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 6 | 137 | 1 | 0 | 144 | 1 | 120 | 0 | 0 | 121 |
| 1615 - 1630 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 8 | 0 | 8 | 8 | 128 | 2 | 0 | 138 | 1 | 162 | 0 | 0 | 163 |
| 1630 - 1645 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 14 | 0 | 14 | 9 | 151 | 1 | 0 | 161 | 0 | 136 | 0 | 0 | 136 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 14 | 10 | 143 | 0 | 0 | 153 | 2 | 148 | 2 | 0 | 152 |
| Hourly Total | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 46 | 0 | 47 | 33 | 559 | 4 | 0 | 596 | 4 | 566 | 2 | 0 | 572 |
| 1700 - 1715 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 11 | 0 | 11 | 10 | 141 | 1 | 0 | 152 | 0 | 152 | 2 | 0 | 154 |
| 1715 - 1730 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 10 | 0 | 10 | 10 | 160 | 0 | 0 | 170 | 0 | 154 | 2 | 0 | 156 |
| 1730 - 1745 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 13 | 0 | 13 | 18 | 140 | 0 | 0 | 158 | 0 | 144 | 0 | 0 | 144 |
| 1745 - 1800 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 16 | 0 | 17 | 16 | 140 | 1 | 0 | 157 | 0 | 123 | 0 | 0 | 123 |
| Hourly Total | 1 | 0 | 5 | 0 | 6 | 0 | 1 | 50 | 0 | 51 | 54 | 581 | 2 | 0 | 637 | 0 | 573 | 4 | 0 | 577 |
| Grand Total | 1 | 0 | 7 | 0 | 8 | 0 | 2 | 96 | 0 | 98 | 87 | 1140 | 6 | 0 | 1233 | 4 | 1139 | 6 | 0 | 1149 |
| Approach % | 12.50 | 0.00 | 87.50 | 0.00 | - | 0.00 | 2.04 | 97.96 | 0.00 | - | 7.06 | 92.46 | 0.49 | 0.00 | - | 0.35 | 99.13 | 0.52 | 0.00 | - |
| Intersection % | 0.04 | 0.00 | 0.28 | 0.00 | 0.32 | 0.00 | 0.08 | 3.86 | 0.00 | 3.94 | 3.50 | 45.82 | 0.24 | 0.00 | 49.56 | 0.16 | 45.78 | 0.24 | 0.00 | 46.18 |

Canton, GA
Classified Turn Movement Count

Site 9 of 23

Little Rd (South)
Little Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.156937°, -84.430821°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 5 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 1 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 1 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 2 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 20 | 0 | 0 | 20 | 1 | 8 | 0 | 0 | 9 |
| 0800 - 0815 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 5 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 0 | 1 |
| 0845 - 0900 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 4 |
| Hourly Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 28 | 0 | 10 | 0 | 0 | 10 |
| Grand Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 4 | 0 | 4 | 0 | 48 | 0 | 0 | 48 | 1 | 18 | 0 | 0 | 19 |
| Approach % | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - | 5.26 | 94.74 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 2.74 | 0.00 | 2.74 | 0.00 | 0.00 | 5.48 | 0.00 | 5.48 | 0.00 | 65.75 | 0.00 | 0.00 | 65.75 | 1.37 | 24.66 | 0.00 | 0.00 | 26.03 |

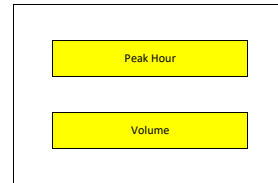
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-------------------|-------------|--------------|---------------|--------------|-------------------|-------------|--------------|---------------|--------------|----------------------|--------------|---------------|----------------|--------------|----------------------|--------------|---------------|----------------|--------------|
| | Little Rd (South) | | | | | Little Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 9.1 | Thru 9.2 | Right 9.3 | U-Turn 9.4 | App Total | Left 9.5 | Thru 9.6 | Right 9.7 | U-Turn 9.8 | App Total | Left 9.9 | Thru 9.10 | Right 9.11 | U-Turn 9.12 | App Total | Left 9.13 | Thru 9.14 | Right 9.15 | U-Turn 9.16 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 5 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 3 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 0 | 0 | 10 | 0 | 16 | 0 | 0 | 16 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 10 | 0 | 0 | 10 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 12 | 0 | 0 | 16 | 0 | 26 | 0 | 0 | 26 |
| Approach % | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 25.00 | 75.00 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.52 | 28.57 | 0.00 | 0.00 | 38.10 | 0.00 | 61.90 | 0.00 | 0.00 | 61.90 |

Canton, GA
Peak Hour Turning Movement Count



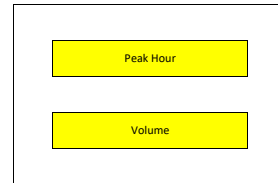
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0745 - 0845 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1630 - 1730 |



Canton, GA
Classified Turn Movement Count

Site 10 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Hickory Rd (West)
Hickory Rd (East)

Lat/Long
34.169881°, -84.422694°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
All vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-------|-------------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App |
| | 10.1 | 10.2 | 10.3 | 10.4 | Total | 10.5 | 10.6 | 10.7 | 10.8 | Total | 10.9 | 10.10 | 10.11 | 10.12 | Total | 10.13 | 10.14 | 10.15 | 10.16 | Total |
| 0600 - 0615 | 1 | 17 | 16 | 0 | 34 | 2 | 28 | 8 | 0 | 38 | 8 | 102 | 3 | 0 | 113 | 13 | 10 | 1 | 0 | 24 |
| 0615 - 0630 | 1 | 14 | 17 | 0 | 32 | 6 | 36 | 4 | 0 | 46 | 28 | 133 | 9 | 0 | 170 | 23 | 14 | 4 | 0 | 41 |
| 0630 - 0645 | 6 | 29 | 38 | 0 | 73 | 8 | 47 | 11 | 0 | 66 | 23 | 121 | 6 | 0 | 150 | 20 | 19 | 6 | 0 | 45 |
| 0645 - 0700 | 7 | 44 | 46 | 0 | 97 | 4 | 56 | 17 | 0 | 77 | 43 | 151 | 9 | 0 | 203 | 18 | 31 | 14 | 0 | 63 |
| Hourly Total | 15 | 104 | 117 | 0 | 236 | 20 | 167 | 40 | 0 | 227 | 102 | 507 | 27 | 0 | 636 | 74 | 74 | 25 | 0 | 173 |
| 0700 - 0715 | 11 | 63 | 54 | 0 | 128 | 29 | 92 | 60 | 0 | 181 | 80 | 138 | 6 | 0 | 224 | 27 | 42 | 45 | 0 | 114 |
| 0715 - 0730 | 18 | 71 | 32 | 0 | 121 | 49 | 78 | 67 | 0 | 194 | 80 | 134 | 4 | 0 | 218 | 26 | 56 | 21 | 0 | 103 |
| 0730 - 0745 | 33 | 69 | 50 | 0 | 152 | 32 | 89 | 88 | 0 | 209 | 44 | 119 | 10 | 0 | 173 | 40 | 69 | 12 | 0 | 121 |
| 0745 - 0800 | 52 | 45 | 56 | 0 | 153 | 6 | 74 | 53 | 0 | 133 | 53 | 108 | 13 | 0 | 174 | 38 | 87 | 16 | 0 | 141 |
| Hourly Total | 114 | 248 | 192 | 0 | 554 | 116 | 333 | 268 | 0 | 717 | 257 | 499 | 33 | 0 | 789 | 131 | 254 | 94 | 0 | 479 |
| 0800 - 0815 | 47 | 63 | 69 | 0 | 179 | 24 | 90 | 58 | 0 | 172 | 40 | 87 | 7 | 0 | 134 | 30 | 77 | 20 | 0 | 127 |
| 0815 - 0830 | 8 | 59 | 63 | 0 | 130 | 47 | 79 | 64 | 0 | 190 | 82 | 144 | 6 | 0 | 232 | 40 | 31 | 22 | 0 | 93 |
| 0830 - 0845 | 6 | 69 | 61 | 0 | 136 | 36 | 88 | 73 | 0 | 197 | 73 | 104 | 7 | 0 | 184 | 40 | 36 | 37 | 0 | 113 |
| 0845 - 0900 | 2 | 96 | 72 | 0 | 170 | 40 | 73 | 77 | 0 | 190 | 66 | 98 | 5 | 0 | 169 | 44 | 37 | 32 | 0 | 113 |
| Hourly Total | 63 | 287 | 265 | 0 | 615 | 147 | 330 | 272 | 0 | 749 | 261 | 433 | 25 | 0 | 719 | 154 | 181 | 111 | 0 | 446 |
| Grand Total | 192 | 639 | 574 | 0 | 1405 | 283 | 830 | 580 | 0 | 1693 | 620 | 1439 | 85 | 0 | 2144 | 359 | 509 | 230 | 0 | 1098 |
| Approach % | 13.67 | 45.48 | 40.85 | 0.00 | - | 16.72 | 49.03 | 34.26 | 0.00 | - | 28.92 | 67.12 | 3.96 | 0.00 | - | 32.70 | 46.36 | 20.95 | 0.00 | - |
| Intersection % | 3.03 | 10.08 | 9.05 | 0.00 | 22.16 | 4.46 | 13.09 | 9.15 | 0.00 | 26.70 | 9.78 | 22.70 | 1.34 | 0.00 | 33.82 | 5.66 | 8.03 | 3.63 | 0.00 | 17.32 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
All vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-------|-------------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App |
| | 10.1 | 10.2 | 10.3 | 10.4 | Total | 10.5 | 10.6 | 10.7 | 10.8 | Total | 10.9 | 10.10 | 10.11 | 10.12 | Total | 10.13 | 10.14 | 10.15 | 10.16 | Total |
| 1400 - 1415 | 8 | 67 | 47 | 0 | 122 | 10 | 46 | 38 | 0 | 94 | 36 | 43 | 3 | 0 | 82 | 36 | 69 | 38 | 0 | 143 |
| 1415 - 1430 | 7 | 55 | 32 | 0 | 94 | 14 | 63 | 36 | 0 | 113 | 54 | 62 | 8 | 0 | 124 | 50 | 79 | 30 | 0 | 159 |
| 1430 - 1445 | 5 | 81 | 27 | 0 | 113 | 34 | 67 | 77 | 0 | 178 | 33 | 50 | 5 | 0 | 88 | 49 | 78 | 26 | 0 | 153 |
| 1445 - 1500 | 4 | 54 | 37 | 0 | 95 | 13 | 49 | 43 | 0 | 105 | 37 | 54 | 4 | 0 | 95 | 56 | 69 | 19 | 0 | 144 |
| Hourly Total | 24 | 257 | 143 | 0 | 424 | 71 | 225 | 194 | 0 | 490 | 160 | 209 | 20 | 0 | 389 | 191 | 295 | 113 | 0 | 599 |
| 1500 - 1515 | 10 | 71 | 35 | 0 | 116 | 13 | 64 | 47 | 0 | 124 | 40 | 50 | 12 | 0 | 102 | 44 | 82 | 22 | 0 | 148 |
| 1515 - 1530 | 9 | 69 | 50 | 0 | 128 | 28 | 63 | 30 | 0 | 121 | 76 | 81 | 41 | 0 | 198 | 55 | 81 | 28 | 0 | 164 |
| 1530 - 1545 | 6 | 102 | 55 | 0 | 163 | 15 | 76 | 36 | 0 | 127 | 62 | 86 | 10 | 0 | 158 | 57 | 93 | 26 | 0 | 176 |
| 1545 - 1600 | 8 | 82 | 50 | 0 | 140 | 10 | 46 | 23 | 0 | 79 | 39 | 65 | 11 | 0 | 115 | 43 | 97 | 35 | 0 | 175 |
| Hourly Total | 33 | 324 | 190 | 0 | 547 | 66 | 249 | 136 | 0 | 451 | 217 | 282 | 74 | 0 | 573 | 199 | 353 | 111 | 0 | 663 |
| 1600 - 1615 | 9 | 106 | 53 | 0 | 168 | 32 | 69 | 59 | 0 | 160 | 43 | 58 | 9 | 0 | 110 | 50 | 111 | 21 | 0 | 182 |
| 1615 - 1630 | 11 | 68 | 50 | 0 | 129 | 50 | 92 | 72 | 0 | 214 | 32 | 50 | 12 | 0 | 94 | 68 | 129 | 25 | 0 | 222 |
| 1630 - 1645 | 16 | 73 | 67 | 0 | 156 | 23 | 97 | 42 | 0 | 162 | 40 | 64 | 3 | 0 | 107 | 48 | 131 | 24 | 0 | 203 |
| 1645 - 1700 | 14 | 76 | 58 | 0 | 148 | 14 | 77 | 51 | 0 | 142 | 59 | 81 | 17 | 0 | 157 | 66 | 143 | 27 | 0 | 236 |
| Hourly Total | 50 | 323 | 228 | 0 | 601 | 119 | 335 | 224 | 0 | 678 | 174 | 253 | 41 | 0 | 468 | 232 | 514 | 97 | 0 | 843 |
| 1700 - 1715 | 27 | 58 | 57 | 0 | 142 | 11 | 74 | 66 | 0 | 151 | 47 | 79 | 15 | 0 | 141 | 63 | 152 | 32 | 0 | 247 |
| 1715 - 1730 | 26 | 78 | 61 | 0 | 165 | 22 | 97 | 54 | 0 | 173 | 49 | 103 | 14 | 0 | 166 | 54 | 127 | 21 | 0 | 202 |
| 1730 - 1745 | 18 | 80 | 55 | 0 | 153 | 19 | 75 | 62 | 0 | 156 | 63 | 104 | 14 | 0 | 181 | 65 | 145 | 20 | 0 | 230 |
| 1745 - 1800 | 14 | 69 | 53 | 0 | 136 | 15 | 63 | 60 | 0 | 138 | 46 | 99 | 17 | 0 | 162 | 35 | 170 | 23 | 0 | 228 |
| Hourly Total | 85 | 285 | 226 | 0 | 596 | 67 | 309 | 242 | 0 | 618 | 205 | 385 | 60 | 0 | 650 | 217 | 594 | 96 | 0 | 907 |
| Grand Total | 192 | 1189 | 787 | 0 | 2168 | 323 | 1118 | 796 | 0 | 2237 | 756 | 1129 | 195 | 0 | 2080 | 839 | 1756 | 417 | 0 | 3012 |
| Approach % | 8.86 | 54.84 | 36.30 | 0.00 | - | 14.44 | 49.98 | 35.58 | 0.00 | - | 36.35 | 54.28 | 9.38 | 0.00 | - | 27.86 | 58.30 | 13.84 | 0.00 | - |
| Intersection % | 2.02 | 12.52 | 8.29 | 0.00 | 22.83 | 3.40 | 11.77 | 8.38 | 0.00 | 23.55 | 7.96 | 11.89 | 2.05 | 0.00 | 21.90 | 8.83 | 18.49 | 4.39 | 0.00 | 31.72 |

Canton, GA
Classified Turn Movement Count

Site 10 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Hickory Rd (West)
Hickory Rd (East)

Lat/Long
34.169881°, -84.422694°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-------|-------------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App |
| | 10.1 | 10.2 | 10.3 | 10.4 | Total | 10.5 | 10.6 | 10.7 | 10.8 | Total | 10.9 | 10.10 | 10.11 | 10.12 | Total | 10.13 | 10.14 | 10.15 | 10.16 | Total |
| 0600 - 0615 | 1 | 17 | 15 | 0 | 33 | 2 | 27 | 8 | 0 | 37 | 6 | 102 | 3 | 0 | 111 | 13 | 10 | 0 | 0 | 23 |
| 0615 - 0630 | 1 | 13 | 17 | 0 | 31 | 2 | 36 | 4 | 0 | 42 | 25 | 131 | 9 | 0 | 165 | 23 | 14 | 4 | 0 | 41 |
| 0630 - 0645 | 6 | 27 | 38 | 0 | 71 | 7 | 46 | 10 | 0 | 63 | 23 | 117 | 5 | 0 | 145 | 19 | 18 | 6 | 0 | 43 |
| 0645 - 0700 | 7 | 44 | 45 | 0 | 96 | 4 | 56 | 16 | 0 | 76 | 42 | 148 | 9 | 0 | 199 | 17 | 30 | 14 | 0 | 61 |
| Hourly Total | 15 | 101 | 115 | 0 | 231 | 15 | 165 | 38 | 0 | 218 | 96 | 498 | 26 | 0 | 620 | 72 | 72 | 24 | 0 | 168 |
| 0700 - 0715 | 10 | 60 | 52 | 0 | 122 | 29 | 89 | 60 | 0 | 178 | 80 | 137 | 6 | 0 | 223 | 26 | 37 | 45 | 0 | 108 |
| 0715 - 0730 | 17 | 71 | 29 | 0 | 117 | 49 | 78 | 67 | 0 | 194 | 79 | 134 | 3 | 0 | 216 | 26 | 53 | 21 | 0 | 100 |
| 0730 - 0745 | 32 | 68 | 48 | 0 | 148 | 32 | 89 | 88 | 0 | 209 | 44 | 117 | 10 | 0 | 171 | 40 | 65 | 12 | 0 | 117 |
| 0745 - 0800 | 49 | 44 | 55 | 0 | 148 | 6 | 71 | 53 | 0 | 130 | 52 | 108 | 13 | 0 | 173 | 37 | 81 | 14 | 0 | 132 |
| Hourly Total | 108 | 243 | 184 | 0 | 535 | 116 | 327 | 268 | 0 | 711 | 255 | 496 | 32 | 0 | 783 | 129 | 236 | 92 | 0 | 457 |
| 0800 - 0815 | 46 | 62 | 66 | 0 | 174 | 13 | 90 | 58 | 0 | 161 | 40 | 86 | 7 | 0 | 133 | 29 | 74 | 20 | 0 | 123 |
| 0815 - 0830 | 6 | 57 | 60 | 0 | 123 | 46 | 77 | 59 | 0 | 182 | 82 | 144 | 6 | 0 | 232 | 39 | 30 | 20 | 0 | 89 |
| 0830 - 0845 | 5 | 63 | 57 | 0 | 125 | 35 | 87 | 65 | 0 | 187 | 73 | 99 | 7 | 0 | 179 | 37 | 32 | 31 | 0 | 100 |
| 0845 - 0900 | 2 | 93 | 68 | 0 | 163 | 39 | 72 | 70 | 0 | 181 | 63 | 98 | 5 | 0 | 166 | 43 | 36 | 29 | 0 | 108 |
| Hourly Total | 59 | 275 | 251 | 0 | 585 | 133 | 326 | 252 | 0 | 711 | 258 | 427 | 25 | 0 | 710 | 148 | 172 | 100 | 0 | 420 |
| Grand Total | 182 | 619 | 550 | 0 | 1351 | 264 | 818 | 558 | 0 | 1640 | 609 | 1421 | 83 | 0 | 2113 | 349 | 480 | 216 | 0 | 1045 |
| Approach % | 13.47 | 45.82 | 40.71 | 0.00 | - | 16.10 | 49.88 | 34.02 | 0.00 | - | 28.82 | 67.25 | 3.93 | 0.00 | - | 33.40 | 45.93 | 20.67 | 0.00 | - |
| Intersection % | 2.96 | 10.07 | 8.94 | 0.00 | 21.97 | 4.29 | 13.30 | 9.07 | 0.00 | 26.67 | 9.90 | 23.11 | 1.35 | 0.00 | 34.36 | 5.68 | 7.81 | 3.51 | 0.00 | 16.99 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-------|-------------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|--------------------------------|-------|-------|--------|-------|
| | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App | Left | Thru | Right | U-Turn | App |
| | 10.1 | 10.2 | 10.3 | 10.4 | Total | 10.5 | 10.6 | 10.7 | 10.8 | Total | 10.9 | 10.10 | 10.11 | 10.12 | Total | 10.13 | 10.14 | 10.15 | 10.16 | Total |
| 1400 - 1415 | 6 | 67 | 46 | 0 | 119 | 9 | 46 | 37 | 0 | 92 | 35 | 41 | 3 | 0 | 79 | 36 | 66 | 38 | 0 | 140 |
| 1415 - 1430 | 7 | 55 | 30 | 0 | 92 | 14 | 59 | 35 | 0 | 108 | 54 | 62 | 8 | 0 | 124 | 49 | 75 | 30 | 0 | 154 |
| 1430 - 1445 | 3 | 81 | 26 | 0 | 110 | 32 | 63 | 75 | 0 | 170 | 32 | 49 | 4 | 0 | 85 | 49 | 76 | 26 | 0 | 151 |
| 1445 - 1500 | 4 | 54 | 37 | 0 | 95 | 13 | 46 | 43 | 0 | 102 | 35 | 51 | 4 | 0 | 90 | 55 | 65 | 18 | 0 | 138 |
| Hourly Total | 20 | 257 | 139 | 0 | 416 | 68 | 214 | 190 | 0 | 472 | 156 | 203 | 19 | 0 | 378 | 189 | 282 | 112 | 0 | 583 |
| 1500 - 1515 | 7 | 70 | 34 | 0 | 111 | 13 | 64 | 46 | 0 | 123 | 39 | 46 | 12 | 0 | 97 | 41 | 74 | 22 | 0 | 137 |
| 1515 - 1530 | 8 | 67 | 50 | 0 | 125 | 24 | 58 | 30 | 0 | 112 | 75 | 77 | 41 | 0 | 193 | 54 | 77 | 28 | 0 | 159 |
| 1530 - 1545 | 5 | 101 | 55 | 0 | 161 | 12 | 73 | 36 | 0 | 121 | 62 | 83 | 10 | 0 | 155 | 53 | 90 | 26 | 0 | 169 |
| 1545 - 1600 | 8 | 81 | 50 | 0 | 139 | 9 | 45 | 22 | 0 | 76 | 39 | 64 | 11 | 0 | 114 | 41 | 88 | 33 | 0 | 162 |
| Hourly Total | 28 | 319 | 189 | 0 | 536 | 58 | 240 | 134 | 0 | 432 | 215 | 270 | 74 | 0 | 559 | 189 | 329 | 109 | 0 | 627 |
| 1600 - 1615 | 8 | 106 | 53 | 0 | 167 | 29 | 68 | 59 | 0 | 156 | 43 | 55 | 9 | 0 | 107 | 46 | 109 | 21 | 0 | 176 |
| 1615 - 1630 | 10 | 67 | 50 | 0 | 127 | 41 | 91 | 70 | 0 | 202 | 32 | 49 | 11 | 0 | 92 | 66 | 128 | 23 | 0 | 217 |
| 1630 - 1645 | 15 | 73 | 67 | 0 | 155 | 22 | 94 | 41 | 0 | 157 | 40 | 61 | 3 | 0 | 104 | 47 | 124 | 24 | 0 | 195 |
| 1645 - 1700 | 13 | 74 | 58 | 0 | 145 | 13 | 75 | 48 | 0 | 136 | 57 | 79 | 17 | 0 | 153 | 65 | 141 | 26 | 0 | 232 |
| Hourly Total | 46 | 320 | 228 | 0 | 594 | 105 | 328 | 218 | 0 | 651 | 172 | 244 | 40 | 0 | 456 | 224 | 502 | 94 | 0 | 820 |
| 1700 - 1715 | 27 | 58 | 55 | 0 | 140 | 11 | 73 | 65 | 0 | 149 | 46 | 77 | 15 | 0 | 138 | 62 | 148 | 32 | 0 | 242 |
| 1715 - 1730 | 26 | 78 | 59 | 0 | 163 | 21 | 96 | 54 | 0 | 171 | 48 | 101 | 14 | 0 | 163 | 54 | 126 | 21 | 0 | 201 |
| 1730 - 1745 | 18 | 80 | 54 | 0 | 152 | 18 | 72 | 62 | 0 | 152 | 62 | 100 | 14 | 0 | 176 | 65 | 144 | 20 | 0 | 229 |
| 1745 - 1800 | 14 | 69 | 52 | 0 | 135 | 15 | 60 | 60 | 0 | 135 | 46 | 98 | 16 | 0 | 160 | 35 | 170 | 23 | 0 | 228 |
| Hourly Total | 85 | 285 | 220 | 0 | 590 | 65 | 301 | 241 | 0 | 607 | 202 | 376 | 59 | 0 | 637 | 216 | 588 | 96 | 0 | 900 |
| Grand Total | 179 | 1181 | 776 | 0 | 2136 | 296 | 1083 | 783 | 0 | 2162 | 745 | 1093 | 192 | 0 | 2030 | 818 | 1701 | 411 | 0 | 2930 |
| Approach % | 8.38 | 55.29 | 36.33 | 0.00 | - | 13.69 | 50.09 | 36.22 | 0.00 | - | 36.70 | 53.84 | 9.46 | 0.00 | - | 27.92 | 58.05 | 14.03 | 0.00 | - |
| Intersection % | 1.93 | 12.76 | 8.38 | 0.00 | 23.07 | 3.20 | 11.70 | 8.46 | 0.00 | 23.35 | 8.05 | 11.81 | 2.07 | 0.00 | 21.93 | 8.84 | 18.37 | 4.44 | 0.00 | 31.65 |

Canton, GA
Classified Turn Movement Count

Site 10 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Hickory Rd (West)
Hickory Rd (East)

Lat/Long
34.169881°, -84.422694°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|--------------------------------|-------|-------|--------|-----------|--------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 10.1 | 10.2 | 10.3 | 10.4 | | 10.5 | 10.6 | 10.7 | 10.8 | | 10.9 | 10.10 | 10.11 | 10.12 | | 10.13 | 10.14 | 10.15 | 10.16 | |
| 0600 - 0615 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 |
| 0615 - 0630 | 0 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 4 | 3 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 0630 - 0645 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 3 | 0 | 4 | 1 | 0 | 5 | 1 | 1 | 0 | 0 | 2 |
| 0645 - 0700 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 2 |
| Hourly Total | 0 | 3 | 2 | 0 | 5 | 5 | 2 | 2 | 0 | 9 | 6 | 9 | 1 | 0 | 16 | 2 | 2 | 1 | 0 | 5 |
| 0700 - 0715 | 1 | 3 | 2 | 0 | 6 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 1 | 5 | 0 | 0 | 6 |
| 0715 - 0730 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 3 |
| 0730 - 0745 | 1 | 1 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 4 |
| 0745 - 0800 | 3 | 1 | 1 | 0 | 5 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 6 | 2 | 0 | 9 |
| Hourly Total | 6 | 5 | 8 | 0 | 19 | 0 | 6 | 0 | 0 | 6 | 2 | 3 | 1 | 0 | 6 | 2 | 18 | 2 | 0 | 22 |
| 0800 - 0815 | 1 | 1 | 3 | 0 | 5 | 11 | 0 | 0 | 0 | 11 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 4 |
| 0815 - 0830 | 2 | 2 | 3 | 0 | 7 | 1 | 2 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 4 |
| 0830 - 0845 | 1 | 6 | 4 | 0 | 11 | 1 | 1 | 8 | 0 | 10 | 0 | 5 | 0 | 0 | 5 | 3 | 4 | 6 | 0 | 13 |
| 0845 - 0900 | 0 | 3 | 4 | 0 | 7 | 1 | 1 | 7 | 0 | 9 | 3 | 0 | 0 | 0 | 3 | 1 | 1 | 3 | 0 | 5 |
| Hourly Total | 4 | 12 | 14 | 0 | 30 | 14 | 4 | 20 | 0 | 38 | 3 | 6 | 0 | 0 | 9 | 6 | 9 | 11 | 0 | 26 |
| Grand Total | 10 | 20 | 24 | 0 | 54 | 19 | 12 | 22 | 0 | 53 | 11 | 18 | 2 | 0 | 31 | 10 | 29 | 14 | 0 | 53 |
| Approach % | 18.52 | 37.04 | 44.44 | 0.00 | - | 35.85 | 22.64 | 41.51 | 0.00 | - | 35.48 | 58.06 | 6.45 | 0.00 | - | 18.87 | 54.72 | 26.42 | 0.00 | - |
| Intersection % | 5.24 | 10.47 | 12.57 | 0.00 | 28.27 | 9.95 | 6.28 | 11.52 | 0.00 | 27.75 | 5.76 | 9.42 | 1.05 | 0.00 | 16.23 | 5.24 | 15.18 | 7.33 | 0.00 | 27.75 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
Heavy Vehicles

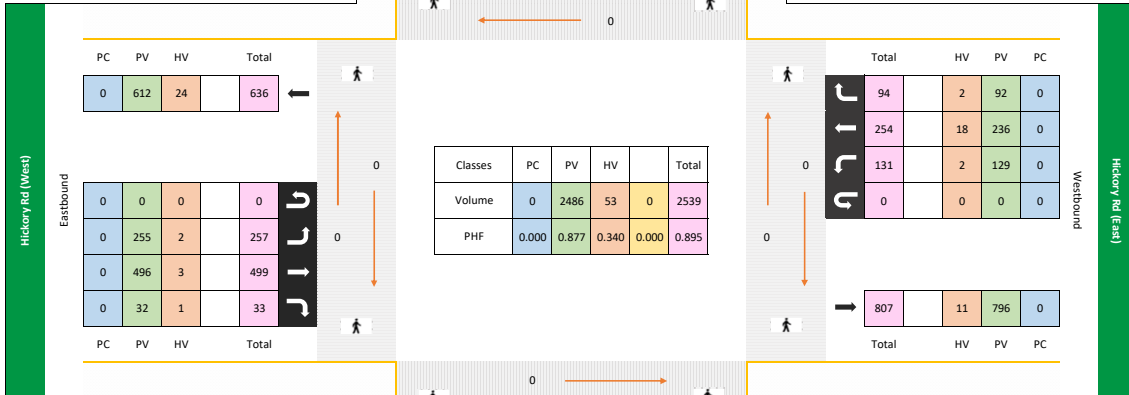
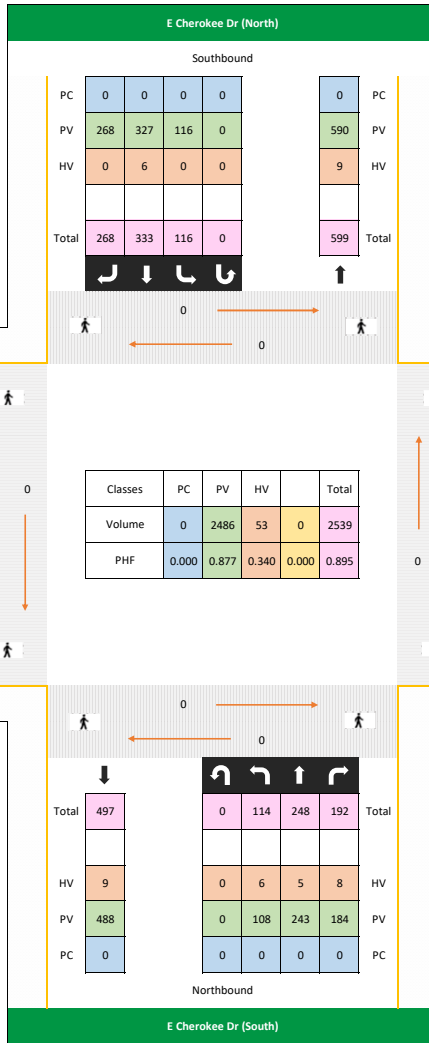
| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Hickory Rd (West) | | | | | Westbound Hickory Rd (East) | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|--------------------------------|-------|-------|--------|-----------|--------------------------------|-------|-------|--------|-----------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 10.1 | 10.2 | 10.3 | 10.4 | | 10.5 | 10.6 | 10.7 | 10.8 | | 10.9 | 10.10 | 10.11 | 10.12 | | 10.13 | 10.14 | 10.15 | 10.16 | |
| 1400 - 1415 | 2 | 0 | 1 | 0 | 3 | 1 | 0 | 1 | 0 | 2 | 1 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 3 |
| 1415 - 1430 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 5 |
| 1430 - 1445 | 2 | 0 | 1 | 0 | 3 | 2 | 4 | 2 | 0 | 8 | 1 | 1 | 1 | 0 | 3 | 0 | 2 | 0 | 0 | 2 |
| 1445 - 1500 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 2 | 3 | 0 | 0 | 5 | 1 | 4 | 1 | 0 | 6 |
| Hourly Total | 4 | 0 | 4 | 0 | 8 | 3 | 11 | 4 | 0 | 18 | 4 | 6 | 1 | 0 | 11 | 2 | 13 | 1 | 0 | 16 |
| 1500 - 1515 | 3 | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 5 | 3 | 8 | 0 | 0 | 11 |
| 1515 - 1530 | 1 | 2 | 0 | 0 | 3 | 4 | 5 | 0 | 0 | 9 | 1 | 4 | 0 | 0 | 5 | 1 | 4 | 0 | 0 | 5 |
| 1530 - 1545 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 3 | 4 | 3 | 0 | 0 | 7 |
| 1545 - 1600 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 13 |
| Hourly Total | 5 | 5 | 1 | 0 | 11 | 8 | 9 | 2 | 0 | 19 | 2 | 12 | 0 | 0 | 14 | 10 | 24 | 2 | 0 | 36 |
| 1600 - 1615 | 1 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 4 | 2 | 0 | 0 | 6 |
| 1615 - 1630 | 1 | 1 | 0 | 0 | 2 | 9 | 1 | 2 | 0 | 12 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 2 | 0 | 5 |
| 1630 - 1645 | 1 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 5 | 0 | 3 | 0 | 0 | 3 | 1 | 7 | 0 | 0 | 8 |
| 1645 - 1700 | 1 | 2 | 0 | 0 | 3 | 1 | 2 | 3 | 0 | 6 | 2 | 2 | 0 | 0 | 4 | 1 | 2 | 1 | 0 | 4 |
| Hourly Total | 4 | 3 | 0 | 0 | 7 | 14 | 7 | 6 | 0 | 27 | 2 | 9 | 1 | 0 | 12 | 8 | 12 | 3 | 0 | 23 |
| 1700 - 1715 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 0 | 0 | 3 | 1 | 4 | 0 | 0 | 5 |
| 1715 - 1730 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 |
| 1730 - 1745 | 0 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 1 | 4 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 1 |
| 1745 - 1800 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 6 | 0 | 6 | 2 | 8 | 1 | 0 | 11 | 3 | 9 | 1 | 0 | 13 | 1 | 6 | 0 | 0 | 7 |
| Grand Total | 13 | 8 | 11 | 0 | 32 | 27 | 35 | 13 | 0 | 75 | 11 | 36 | 3 | 0 | 50 | 21 | 55 | 6 | 0 | 82 |
| Approach % | 40.63 | 25.00 | 34.38 | 0.00 | - | 36.00 | 46.67 | 17.33 | 0.00 | - | 22.00 | 72.00 | 6.00 | 0.00 | - | 25.61 | 67.07 | 7.32 | 0.00 | - |
| Intersection % | 5.44 | 3.35 | 4.60 | 0.00 | 13.39 | 11.30 | 14.64 | 5.44 | 0.00 | 31.38 | 4.60 | 15.06 | 1.26 | 0.00 | 20.92 | 8.79 | 23.01 | 2.51 | 0.00 | 34.31 |

Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 0900 (Weekday 3h Session) (13-02-2) |
| Peak Hour | 0700 - 0800 |

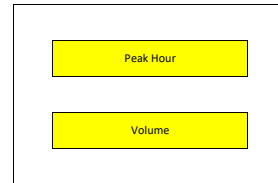
| |
|-----------|
| Peak Hour |
| Volume |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 4h Session) (13-02-2) |
| Peak Hour | 1645 - 1745 |



Canton, GA
Classified Turn Movement Count

Site 11 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Bart Manous Rd
Local Access

Lat/Long
34.195780°, -84.422047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------|------|-------|--------|-----------|--------------|------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 0700 - 0715 | 4 | 34 | 0 | 0 | 38 | 0 | 73 | 22 | 0 | 95 | 34 | 0 | 18 | 0 | 52 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 8 | 36 | 0 | 0 | 44 | 0 | 98 | 12 | 0 | 110 | 25 | 0 | 22 | 0 | 47 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 6 | 58 | 0 | 0 | 64 | 0 | 94 | 16 | 0 | 110 | 17 | 0 | 22 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 5 | 31 | 0 | 0 | 36 | 0 | 107 | 13 | 0 | 120 | 26 | 0 | 25 | 0 | 51 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 23 | 159 | 0 | 0 | 182 | 0 | 372 | 63 | 0 | 435 | 102 | 0 | 87 | 0 | 189 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 3 | 31 | 0 | 0 | 34 | 0 | 81 | 20 | 0 | 101 | 27 | 0 | 19 | 0 | 46 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 1 | 31 | 0 | 0 | 32 | 0 | 91 | 24 | 0 | 115 | 21 | 0 | 23 | 0 | 44 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 13 | 31 | 0 | 0 | 44 | 0 | 71 | 23 | 0 | 94 | 19 | 0 | 18 | 0 | 37 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 6 | 36 | 0 | 0 | 42 | 0 | 108 | 18 | 0 | 126 | 17 | 0 | 26 | 0 | 43 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 23 | 129 | 0 | 0 | 152 | 0 | 351 | 85 | 0 | 436 | 84 | 0 | 86 | 0 | 170 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 46 | 288 | 0 | 0 | 334 | 0 | 723 | 148 | 0 | 871 | 186 | 0 | 173 | 0 | 359 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 13.77 | 86.23 | 0.00 | 0.00 | - | 0.00 | 83.01 | 16.99 | 0.00 | - | 51.81 | 0.00 | 48.19 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 2.94 | 18.41 | 0.00 | 0.00 | 21.36 | 0.00 | 46.23 | 9.46 | 0.00 | 55.69 | 11.89 | 0.00 | 11.06 | 0.00 | 22.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------|------|-------|--------|-----------|--------------|------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 1600 - 1615 | 13 | 71 | 0 | 0 | 84 | 0 | 86 | 26 | 0 | 112 | 19 | 0 | 10 | 0 | 29 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 14 | 80 | 0 | 0 | 94 | 0 | 83 | 18 | 0 | 101 | 21 | 0 | 21 | 0 | 42 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 16 | 81 | 1 | 0 | 98 | 0 | 73 | 14 | 0 | 87 | 12 | 0 | 13 | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 28 | 79 | 0 | 0 | 107 | 0 | 73 | 23 | 0 | 96 | 23 | 0 | 9 | 0 | 32 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 71 | 311 | 1 | 0 | 383 | 0 | 315 | 81 | 0 | 396 | 75 | 0 | 53 | 0 | 128 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 12 | 92 | 0 | 0 | 104 | 0 | 76 | 18 | 0 | 94 | 21 | 0 | 14 | 0 | 35 | 1 | 0 | 1 | 0 | 2 |
| 1715 - 1730 | 8 | 96 | 0 | 0 | 104 | 0 | 81 | 27 | 0 | 108 | 17 | 0 | 10 | 0 | 27 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 20 | 83 | 0 | 0 | 103 | 0 | 101 | 19 | 0 | 120 | 24 | 0 | 13 | 0 | 37 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 17 | 97 | 0 | 0 | 114 | 0 | 88 | 27 | 0 | 115 | 21 | 0 | 14 | 0 | 35 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 57 | 368 | 0 | 0 | 425 | 0 | 346 | 91 | 0 | 437 | 83 | 0 | 51 | 0 | 134 | 1 | 0 | 1 | 0 | 2 |
| Grand Total | 128 | 679 | 1 | 0 | 808 | 0 | 661 | 172 | 0 | 833 | 158 | 0 | 104 | 0 | 262 | 1 | 0 | 1 | 0 | 2 |
| Approach % | 15.84 | 84.03 | 0.12 | 0.00 | - | 0.00 | 79.35 | 20.65 | 0.00 | - | 60.31 | 0.00 | 39.69 | 0.00 | - | 50.00 | 0.00 | 50.00 | 0.00 | - |
| Intersection % | 6.72 | 35.64 | 0.05 | 0.00 | 42.41 | 0.00 | 34.70 | 9.03 | 0.00 | 43.73 | 8.29 | 0.00 | 5.46 | 0.00 | 13.75 | 0.05 | 0.00 | 0.05 | 0.00 | 0.10 |

Canton, GA
Classified Turn Movement Count

Site 11 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Bart Manous Rd
Local Access

Lat/Long
34.195780°, -84.422047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------|-------|-------|--------|-----------|--------------|-------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 11.1 | 11.2 | 11.3 | 11.4 | | 11.5 | 11.6 | 11.7 | 11.8 | | 11.9 | 11.10 | 11.11 | 11.12 | | 11.13 | 11.14 | 11.15 | 11.16 | |
| 0700 - 0715 | 4 | 34 | 0 | 0 | 38 | 0 | 73 | 22 | 0 | 95 | 33 | 0 | 18 | 0 | 51 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 8 | 36 | 0 | 0 | 44 | 0 | 98 | 11 | 0 | 109 | 25 | 0 | 21 | 0 | 46 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 6 | 58 | 0 | 0 | 64 | 0 | 94 | 15 | 0 | 109 | 17 | 0 | 22 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 5 | 30 | 0 | 0 | 35 | 0 | 107 | 13 | 0 | 120 | 25 | 0 | 25 | 0 | 50 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 23 | 158 | 0 | 0 | 181 | 0 | 372 | 61 | 0 | 433 | 100 | 0 | 86 | 0 | 186 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 3 | 26 | 0 | 0 | 29 | 0 | 75 | 20 | 0 | 95 | 26 | 0 | 18 | 0 | 44 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 1 | 25 | 0 | 0 | 26 | 0 | 83 | 23 | 0 | 106 | 21 | 0 | 23 | 0 | 44 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 13 | 29 | 0 | 0 | 42 | 0 | 64 | 21 | 0 | 85 | 19 | 0 | 18 | 0 | 37 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 6 | 33 | 0 | 0 | 39 | 0 | 98 | 16 | 0 | 114 | 17 | 0 | 26 | 0 | 43 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 23 | 113 | 0 | 0 | 136 | 0 | 320 | 80 | 0 | 400 | 83 | 0 | 85 | 0 | 168 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 46 | 271 | 0 | 0 | 317 | 0 | 692 | 141 | 0 | 833 | 183 | 0 | 171 | 0 | 354 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 14.51 | 85.49 | 0.00 | 0.00 | - | 0.00 | 83.07 | 16.93 | 0.00 | - | 51.69 | 0.00 | 48.31 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 3.06 | 18.02 | 0.00 | 0.00 | 21.08 | 0.00 | 46.01 | 9.38 | 0.00 | 55.39 | 12.17 | 0.00 | 11.37 | 0.00 | 23.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------|-------|-------|--------|-----------|--------------|-------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| | 11.1 | 11.2 | 11.3 | 11.4 | | 11.5 | 11.6 | 11.7 | 11.8 | | 11.9 | 11.10 | 11.11 | 11.12 | | 11.13 | 11.14 | 11.15 | 11.16 | |
| 1600 - 1615 | 13 | 69 | 0 | 0 | 82 | 0 | 82 | 24 | 0 | 106 | 18 | 0 | 10 | 0 | 28 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 14 | 79 | 0 | 0 | 93 | 0 | 78 | 17 | 0 | 95 | 19 | 0 | 20 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 16 | 81 | 1 | 0 | 98 | 0 | 68 | 14 | 0 | 82 | 12 | 0 | 13 | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 27 | 79 | 0 | 0 | 106 | 0 | 67 | 23 | 0 | 90 | 21 | 0 | 9 | 0 | 30 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 70 | 308 | 1 | 0 | 379 | 0 | 295 | 78 | 0 | 373 | 70 | 0 | 52 | 0 | 122 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 12 | 92 | 0 | 0 | 104 | 0 | 76 | 18 | 0 | 94 | 21 | 0 | 14 | 0 | 35 | 1 | 0 | 1 | 0 | 2 |
| 1715 - 1730 | 8 | 96 | 0 | 0 | 104 | 0 | 78 | 27 | 0 | 105 | 17 | 0 | 10 | 0 | 27 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 20 | 83 | 0 | 0 | 103 | 0 | 99 | 19 | 0 | 118 | 23 | 0 | 13 | 0 | 36 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 17 | 97 | 0 | 0 | 114 | 0 | 86 | 26 | 0 | 112 | 21 | 0 | 14 | 0 | 35 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 57 | 368 | 0 | 0 | 425 | 0 | 339 | 90 | 0 | 429 | 82 | 0 | 51 | 0 | 133 | 1 | 0 | 1 | 0 | 2 |
| Grand Total | 127 | 676 | 1 | 0 | 804 | 0 | 634 | 168 | 0 | 802 | 152 | 0 | 103 | 0 | 255 | 1 | 0 | 1 | 0 | 2 |
| Approach % | 15.80 | 84.08 | 0.12 | 0.00 | - | 0.00 | 79.05 | 20.95 | 0.00 | - | 59.61 | 0.00 | 40.39 | 0.00 | - | 50.00 | 0.00 | 50.00 | 0.00 | - |
| Intersection % | 6.82 | 36.29 | 0.05 | 0.00 | 43.16 | 0.00 | 34.03 | 9.02 | 0.00 | 43.05 | 8.16 | 0.00 | 5.53 | 0.00 | 13.69 | 0.05 | 0.00 | 0.05 | 0.00 | 0.11 |

Canton, GA
Classified Turn Movement Count

Site 11 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Bart Manous Rd
Local Access

Lat/Long
34.195780°, -84.422047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|----------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left 11.1 | Thru 11.2 | Right 11.3 | U-Turn 11.4 | App Total | Left 11.5 | Thru 11.6 | Right 11.7 | U-Turn 11.8 | App Total | Left 11.9 | Thru 11.10 | Right 11.11 | U-Turn 11.12 | App Total | Left 11.13 | Thru 11.14 | Right 11.15 | U-Turn 11.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 5 | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 6 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 6 | 0 | 0 | 6 | 0 | 8 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 2 | 0 | 0 | 2 | 0 | 7 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 3 | 0 | 0 | 3 | 0 | 10 | 2 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 16 | 0 | 0 | 16 | 0 | 31 | 5 | 0 | 36 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 17 | 0 | 0 | 17 | 0 | 31 | 7 | 0 | 38 | 3 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 81.58 | 18.42 | 0.00 | - | 60.00 | 0.00 | 40.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 28.33 | 0.00 | 0.00 | 28.33 | 0.00 | 51.67 | 11.67 | 0.00 | 63.33 | 5.00 | 0.00 | 3.33 | 0.00 | 8.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

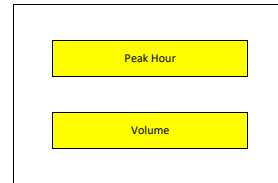
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|----------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Bart Manous Rd | | | | | Local Access | | | | |
| | Left 11.1 | Thru 11.2 | Right 11.3 | U-Turn 11.4 | App Total | Left 11.5 | Thru 11.6 | Right 11.7 | U-Turn 11.8 | App Total | Left 11.9 | Thru 11.10 | Right 11.11 | U-Turn 11.12 | App Total | Left 11.13 | Thru 11.14 | Right 11.15 | U-Turn 11.16 | App Total |
| 1600 - 1615 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 2 | 0 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 1 | 0 | 6 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 3 | 0 | 0 | 4 | 0 | 20 | 3 | 0 | 23 | 5 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 1 | 3 | 0 | 0 | 4 | 0 | 27 | 4 | 0 | 31 | 6 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 25.00 | 75.00 | 0.00 | 0.00 | - | 0.00 | 87.10 | 12.90 | 0.00 | - | 85.71 | 0.00 | 14.29 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 2.38 | 7.14 | 0.00 | 0.00 | 9.52 | 0.00 | 64.29 | 9.52 | 0.00 | 73.81 | 14.29 | 0.00 | 2.38 | 0.00 | 16.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Peak Hour Turning Movement Count



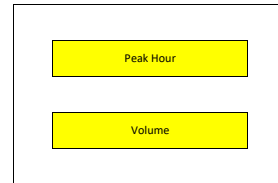
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0700 - 0800 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 12 of 23

Epperson Rd
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.202303°, -84.413885°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|--------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|----------------------|---------------|----------------|--------------|
| | Epperson Rd | | | | E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| | Left 12.1 | Right 12.2 | U-Turn 12.3 | App Total | Left 12.4 | Thru 12.5 | U-Turn 12.6 | App Total | Thru 12.7 | Right 12.8 | U-Turn 12.9 | App Total |
| 0700 - 0715 | 0 | 13 | 0 | 13 | 1 | 64 | 0 | 65 | 76 | 0 | 0 | 76 |
| 0715 - 0730 | 0 | 5 | 0 | 5 | 3 | 59 | 0 | 62 | 109 | 0 | 0 | 109 |
| 0730 - 0745 | 1 | 12 | 0 | 13 | 1 | 75 | 0 | 76 | 106 | 0 | 0 | 106 |
| 0745 - 0800 | 0 | 12 | 0 | 12 | 3 | 53 | 0 | 56 | 100 | 0 | 0 | 100 |
| Hourly Total | 1 | 42 | 0 | 43 | 8 | 251 | 0 | 259 | 391 | 0 | 0 | 391 |
| 0800 - 0815 | 0 | 9 | 0 | 9 | 3 | 57 | 0 | 60 | 97 | 0 | 0 | 97 |
| 0815 - 0830 | 0 | 9 | 0 | 9 | 2 | 50 | 0 | 52 | 105 | 0 | 0 | 105 |
| 0830 - 0845 | 0 | 6 | 0 | 6 | 3 | 44 | 0 | 47 | 79 | 2 | 0 | 81 |
| 0845 - 0900 | 0 | 16 | 0 | 16 | 8 | 42 | 1 | 51 | 116 | 0 | 0 | 116 |
| Hourly Total | 0 | 40 | 0 | 40 | 16 | 193 | 1 | 210 | 397 | 2 | 0 | 399 |
| Grand Total | 1 | 82 | 0 | 83 | 24 | 444 | 1 | 469 | 788 | 2 | 0 | 790 |
| Approach % | 1.20 | 98.80 | 0.00 | - | 5.12 | 94.67 | 0.21 | - | 99.75 | 0.25 | 0.00 | - |
| Intersection % | 0.07 | 6.11 | 0.00 | 6.18 | 1.79 | 33.08 | 0.07 | 34.95 | 58.72 | 0.15 | 0.00 | 58.87 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | |
|----------------|--------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|----------------------|---------------|----------------|--------------|
| | Epperson Rd | | | | E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| | Left 12.1 | Right 12.2 | U-Turn 12.3 | App Total | Left 12.4 | Thru 12.5 | U-Turn 12.6 | App Total | Thru 12.7 | Right 12.8 | U-Turn 12.9 | App Total |
| 1600 - 1615 | 1 | 9 | 0 | 10 | 6 | 81 | 0 | 87 | 106 | 0 | 0 | 106 |
| 1615 - 1630 | 0 | 7 | 0 | 7 | 8 | 94 | 0 | 102 | 88 | 0 | 0 | 88 |
| 1630 - 1645 | 1 | 7 | 0 | 8 | 6 | 86 | 0 | 92 | 87 | 0 | 0 | 87 |
| 1645 - 1700 | 0 | 5 | 0 | 5 | 10 | 93 | 0 | 103 | 84 | 0 | 0 | 84 |
| Hourly Total | 2 | 28 | 0 | 30 | 30 | 354 | 0 | 384 | 365 | 0 | 0 | 365 |
| 1700 - 1715 | 0 | 9 | 0 | 9 | 8 | 99 | 0 | 107 | 86 | 1 | 0 | 87 |
| 1715 - 1730 | 0 | 7 | 0 | 7 | 11 | 110 | 0 | 121 | 104 | 0 | 0 | 104 |
| 1730 - 1745 | 0 | 8 | 0 | 8 | 7 | 98 | 0 | 105 | 108 | 0 | 0 | 108 |
| 1745 - 1800 | 2 | 4 | 0 | 6 | 12 | 108 | 0 | 120 | 109 | 1 | 0 | 110 |
| Hourly Total | 2 | 28 | 0 | 30 | 38 | 415 | 0 | 453 | 407 | 2 | 0 | 409 |
| Grand Total | 4 | 56 | 0 | 60 | 68 | 769 | 0 | 837 | 772 | 2 | 0 | 774 |
| Approach % | 6.67 | 93.33 | 0.00 | - | 8.12 | 91.88 | 0.00 | - | 99.74 | 0.26 | 0.00 | - |
| Intersection % | 0.24 | 3.35 | 0.00 | 3.59 | 4.07 | 46.02 | 0.00 | 50.09 | 46.20 | 0.12 | 0.00 | 46.32 |

Canton, GA
Classified Turn Movement Count

Site 12 of 23

Epperson Rd
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.202303°, -84.413885°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Southbound Epperson Rd | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|---------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|
| | Left | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Thru | Right | U-Turn | App Total |
| | 12.1 | 12.2 | 12.3 | | 12.4 | 12.5 | 12.6 | | 12.7 | 12.8 | 12.9 | |
| 0700 - 0715 | 0 | 13 | 0 | 13 | 1 | 63 | 0 | 64 | 75 | 0 | 0 | 75 |
| 0715 - 0730 | 0 | 4 | 0 | 4 | 3 | 59 | 0 | 62 | 109 | 0 | 0 | 109 |
| 0730 - 0745 | 1 | 12 | 0 | 13 | 1 | 75 | 0 | 76 | 106 | 0 | 0 | 106 |
| 0745 - 0800 | 0 | 12 | 0 | 12 | 3 | 51 | 0 | 54 | 100 | 0 | 0 | 100 |
| Hourly Total | 1 | 41 | 0 | 42 | 8 | 248 | 0 | 256 | 390 | 0 | 0 | 390 |
| 0800 - 0815 | 0 | 9 | 0 | 9 | 3 | 53 | 0 | 56 | 88 | 0 | 0 | 88 |
| 0815 - 0830 | 0 | 9 | 0 | 9 | 2 | 45 | 0 | 47 | 96 | 0 | 0 | 96 |
| 0830 - 0845 | 0 | 6 | 0 | 6 | 3 | 40 | 0 | 43 | 69 | 2 | 0 | 71 |
| 0845 - 0900 | 0 | 16 | 0 | 16 | 6 | 40 | 1 | 47 | 108 | 0 | 0 | 108 |
| Hourly Total | 0 | 40 | 0 | 40 | 14 | 178 | 1 | 193 | 361 | 2 | 0 | 363 |
| Grand Total | 1 | 81 | 0 | 82 | 22 | 426 | 1 | 449 | 751 | 2 | 0 | 753 |
| Approach % | 1.22 | 98.78 | 0.00 | - | 4.90 | 94.88 | 0.22 | - | 99.73 | 0.27 | 0.00 | - |
| Intersection % | 0.08 | 6.31 | 0.00 | 6.39 | 1.71 | 33.18 | 0.08 | 34.97 | 58.49 | 0.16 | 0.00 | 58.64 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Southbound Epperson Rd | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|---------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|-----------------------------------|-------|--------|-----------|
| | Left | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Thru | Right | U-Turn | App Total |
| | 12.1 | 12.2 | 12.3 | | 12.4 | 12.5 | 12.6 | | 12.7 | 12.8 | 12.9 | |
| 1600 - 1615 | 1 | 8 | 0 | 9 | 6 | 77 | 0 | 83 | 100 | 0 | 0 | 100 |
| 1615 - 1630 | 0 | 7 | 0 | 7 | 8 | 93 | 0 | 101 | 83 | 0 | 0 | 83 |
| 1630 - 1645 | 1 | 7 | 0 | 8 | 6 | 85 | 0 | 91 | 84 | 0 | 0 | 84 |
| 1645 - 1700 | 0 | 4 | 0 | 4 | 10 | 91 | 0 | 101 | 77 | 0 | 0 | 77 |
| Hourly Total | 2 | 26 | 0 | 28 | 30 | 346 | 0 | 376 | 344 | 0 | 0 | 344 |
| 1700 - 1715 | 0 | 9 | 0 | 9 | 8 | 99 | 0 | 107 | 85 | 1 | 0 | 86 |
| 1715 - 1730 | 0 | 7 | 0 | 7 | 11 | 110 | 0 | 121 | 101 | 0 | 0 | 101 |
| 1730 - 1745 | 0 | 8 | 0 | 8 | 7 | 98 | 0 | 105 | 106 | 0 | 0 | 106 |
| 1745 - 1800 | 2 | 4 | 0 | 6 | 12 | 107 | 0 | 119 | 107 | 1 | 0 | 108 |
| Hourly Total | 2 | 28 | 0 | 30 | 38 | 414 | 0 | 452 | 399 | 2 | 0 | 401 |
| Grand Total | 4 | 54 | 0 | 58 | 68 | 760 | 0 | 828 | 743 | 2 | 0 | 745 |
| Approach % | 6.90 | 93.10 | 0.00 | - | 8.21 | 91.79 | 0.00 | - | 99.73 | 0.27 | 0.00 | - |
| Intersection % | 0.25 | 3.31 | 0.00 | 3.56 | 4.17 | 46.60 | 0.00 | 50.77 | 45.55 | 0.12 | 0.00 | 45.68 |

Canton, GA
Classified Turn Movement Count

Site 12 of 23

Epperson Rd
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.202303°, -84.413885°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound Epperson Rd | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|---------------------------|---------------|----------------|--------------|-----------------------------------|--------------|----------------|--------------|-----------------------------------|---------------|----------------|--------------|
| | Left 12.1 | Right 12.2 | U-Turn 12.3 | App Total | Left 12.4 | Thru 12.5 | U-Turn 12.6 | App Total | Thru 12.7 | Right 12.8 | U-Turn 12.9 | App Total |
| | 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0715 - 0730 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 1 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 | 0 | 0 | 9 |
| 0815 - 0830 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 9 | 0 | 0 | 9 |
| 0830 - 0845 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 10 | 0 | 0 | 10 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 8 | 0 | 0 | 8 |
| Hourly Total | 0 | 0 | 0 | 0 | 2 | 15 | 0 | 17 | 36 | 0 | 0 | 36 |
| Grand Total | 0 | 1 | 0 | 1 | 2 | 18 | 0 | 20 | 37 | 0 | 0 | 37 |
| Approach % | 0.00 | 100.00 | 0.00 | - | 10.00 | 90.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 1.72 | 0.00 | 1.72 | 3.45 | 31.03 | 0.00 | 34.48 | 63.79 | 0.00 | 0.00 | 63.79 |

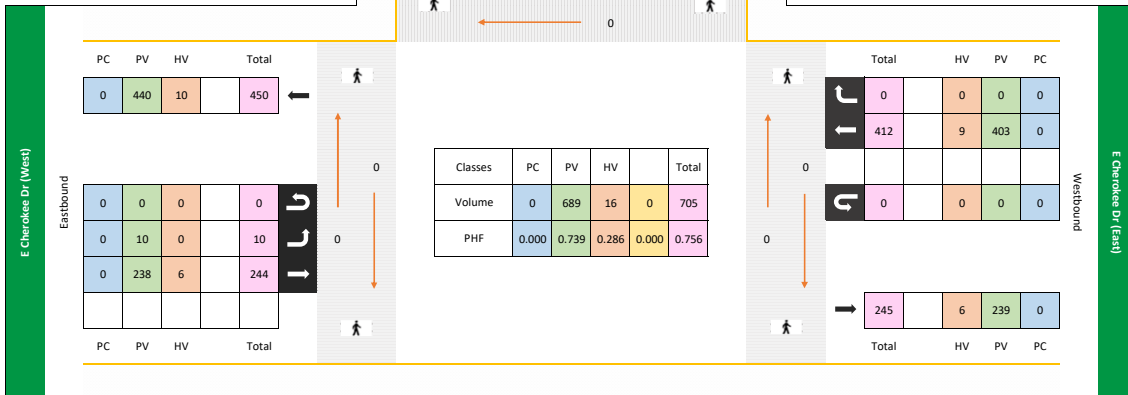
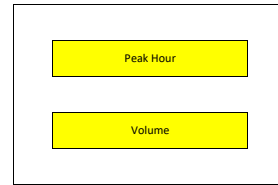
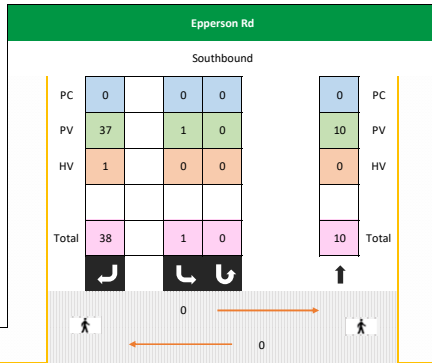
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Southbound Epperson Rd | | | | Eastbound E Cherokee Dr (West) | | | | Westbound E Cherokee Dr (East) | | | |
|----------------|---------------------------|---------------|----------------|--------------|-----------------------------------|--------------|----------------|--------------|-----------------------------------|---------------|----------------|--------------|
| | Left 12.1 | Right 12.2 | U-Turn 12.3 | App Total | Left 12.4 | Thru 12.5 | U-Turn 12.6 | App Total | Thru 12.7 | Right 12.8 | U-Turn 12.9 | App Total |
| | 1600 - 1615 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 4 | 6 | 0 | 0 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 0 | 0 | 5 |
| 1630 - 1645 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 3 |
| 1645 - 1700 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 7 | 0 | 0 | 7 |
| Hourly Total | 0 | 2 | 0 | 2 | 0 | 8 | 0 | 8 | 21 | 0 | 0 | 21 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 8 | 0 | 0 | 8 |
| Grand Total | 0 | 2 | 0 | 2 | 0 | 9 | 0 | 9 | 29 | 0 | 0 | 29 |
| Approach % | 0.00 | 100.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 5.00 | 0.00 | 5.00 | 0.00 | 22.50 | 0.00 | 22.50 | 72.50 | 0.00 | 0.00 | 72.50 |

Canton, GA
Peak Hour Turning Movement Count



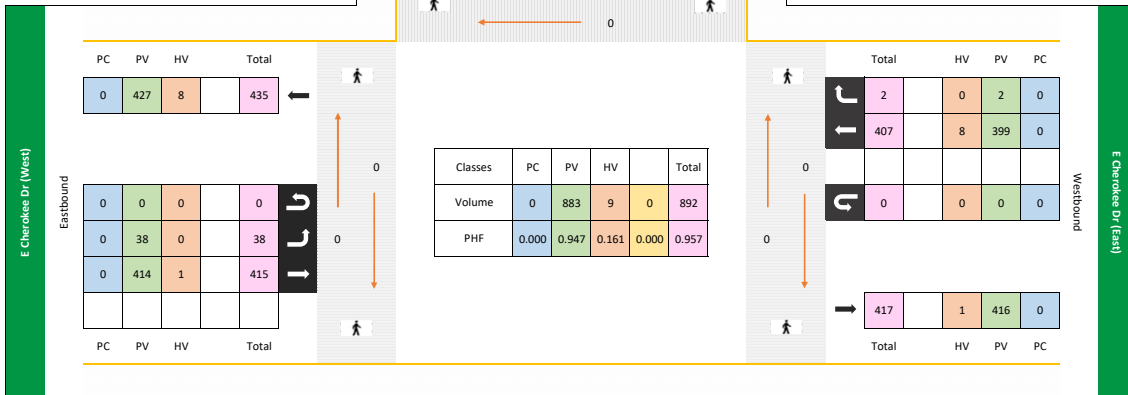
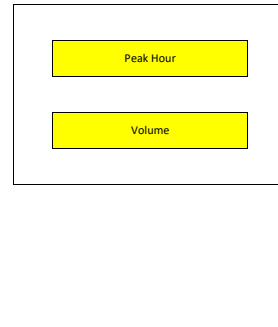
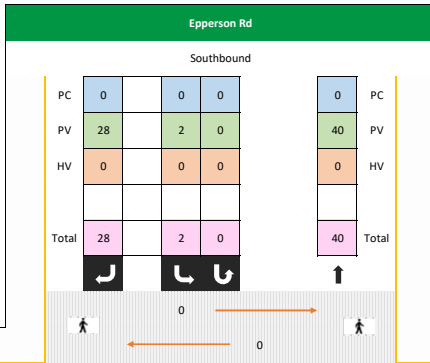
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0715 - 0815 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 13 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Avery Rd
Thomas Rd

Lat/Long
34.206888°, -84.407440°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 0700 - 0715 | 0 | 57 | 0 | 0 | 57 | 0 | 77 | 16 | 0 | 93 | 31 | 0 | 0 | 0 | 31 | 1 | 0 | 0 | 0 | 1 |
| 0715 - 0730 | 0 | 55 | 2 | 0 | 57 | 0 | 107 | 27 | 0 | 134 | 39 | 0 | 0 | 0 | 39 | 0 | 0 | 1 | 0 | 1 |
| 0730 - 0745 | 0 | 82 | 1 | 0 | 83 | 0 | 102 | 27 | 0 | 129 | 42 | 0 | 0 | 0 | 42 | 0 | 0 | 1 | 0 | 1 |
| 0745 - 0800 | 0 | 56 | 1 | 0 | 57 | 1 | 101 | 33 | 0 | 135 | 42 | 0 | 0 | 0 | 42 | 0 | 0 | 1 | 0 | 1 |
| Hourly Total | 0 | 250 | 4 | 0 | 254 | 1 | 387 | 103 | 0 | 491 | 154 | 0 | 0 | 0 | 154 | 1 | 0 | 3 | 0 | 4 |
| 0800 - 0815 | 0 | 57 | 0 | 0 | 57 | 0 | 93 | 22 | 0 | 115 | 30 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 48 | 0 | 0 | 48 | 0 | 108 | 20 | 0 | 128 | 20 | 0 | 0 | 0 | 20 | 0 | 1 | 0 | 0 | 1 |
| 0830 - 0845 | 0 | 45 | 0 | 0 | 45 | 1 | 77 | 29 | 0 | 107 | 18 | 1 | 0 | 0 | 19 | 2 | 1 | 0 | 0 | 3 |
| 0845 - 0900 | 0 | 43 | 0 | 0 | 43 | 0 | 116 | 19 | 0 | 135 | 12 | 1 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 193 | 0 | 0 | 193 | 1 | 394 | 90 | 0 | 485 | 80 | 2 | 0 | 0 | 82 | 2 | 2 | 0 | 0 | 4 |
| Grand Total | 0 | 443 | 4 | 0 | 447 | 2 | 781 | 193 | 0 | 976 | 234 | 2 | 0 | 0 | 236 | 3 | 2 | 3 | 0 | 8 |
| Approach % | 0.00 | 99.11 | 0.89 | 0.00 | - | 0.20 | 80.02 | 19.77 | 0.00 | - | 99.15 | 0.85 | 0.00 | 0.00 | - | 37.50 | 25.00 | 37.50 | 0.00 | - |
| Intersection % | 0.00 | 26.57 | 0.24 | 0.00 | 26.81 | 0.12 | 46.85 | 11.58 | 0.00 | 58.55 | 14.04 | 0.12 | 0.00 | 0.00 | 14.16 | 0.18 | 0.12 | 0.18 | 0.00 | 0.48 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 1600 - 1615 | 0 | 85 | 0 | 0 | 85 | 2 | 105 | 29 | 0 | 136 | 22 | 3 | 0 | 0 | 25 | 1 | 0 | 1 | 0 | 2 |
| 1615 - 1630 | 1 | 87 | 1 | 0 | 89 | 3 | 92 | 42 | 0 | 137 | 36 | 2 | 1 | 0 | 39 | 0 | 1 | 2 | 0 | 3 |
| 1630 - 1645 | 0 | 87 | 1 | 0 | 88 | 2 | 85 | 30 | 0 | 117 | 22 | 3 | 0 | 0 | 25 | 2 | 0 | 1 | 0 | 3 |
| 1645 - 1700 | 1 | 82 | 2 | 0 | 85 | 2 | 82 | 35 | 0 | 119 | 24 | 0 | 0 | 0 | 24 | 1 | 0 | 1 | 0 | 2 |
| Hourly Total | 2 | 341 | 4 | 0 | 347 | 9 | 364 | 136 | 0 | 509 | 104 | 8 | 1 | 0 | 113 | 4 | 1 | 5 | 0 | 10 |
| 1700 - 1715 | 0 | 94 | 0 | 0 | 94 | 1 | 89 | 40 | 0 | 130 | 27 | 2 | 0 | 0 | 29 | 0 | 0 | 3 | 0 | 3 |
| 1715 - 1730 | 0 | 111 | 2 | 0 | 113 | 0 | 101 | 54 | 0 | 155 | 37 | 2 | 0 | 0 | 39 | 1 | 1 | 3 | 0 | 5 |
| 1730 - 1745 | 0 | 106 | 0 | 0 | 106 | 2 | 107 | 44 | 0 | 153 | 27 | 0 | 1 | 0 | 28 | 2 | 1 | 1 | 0 | 4 |
| 1745 - 1800 | 1 | 109 | 0 | 0 | 110 | 0 | 107 | 56 | 0 | 163 | 33 | 1 | 1 | 0 | 35 | 0 | 2 | 1 | 0 | 3 |
| Hourly Total | 1 | 420 | 2 | 0 | 423 | 3 | 404 | 194 | 0 | 601 | 124 | 5 | 2 | 0 | 131 | 3 | 4 | 8 | 0 | 15 |
| Grand Total | 3 | 761 | 6 | 0 | 770 | 12 | 768 | 330 | 0 | 1110 | 228 | 13 | 3 | 0 | 244 | 7 | 5 | 13 | 0 | 25 |
| Approach % | 0.39 | 98.83 | 0.78 | 0.00 | - | 1.08 | 69.19 | 29.73 | 0.00 | - | 93.44 | 5.33 | 1.23 | 0.00 | - | 28.00 | 20.00 | 52.00 | 0.00 | - |
| Intersection % | 0.14 | 35.41 | 0.28 | 0.00 | 35.83 | 0.56 | 35.74 | 15.36 | 0.00 | 51.65 | 10.61 | 0.60 | 0.14 | 0.00 | 11.35 | 0.33 | 0.23 | 0.60 | 0.00 | 1.16 |

Canton, GA
Classified Turn Movement Count

Site 13 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Avery Rd
Thomas Rd

Lat/Long
34.206888°, -84.407440°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 0700 - 0715 | 0 | 57 | 0 | 0 | 57 | 0 | 76 | 15 | 0 | 91 | 28 | 0 | 0 | 0 | 28 | 1 | 0 | 0 | 0 | 1 |
| 0715 - 0730 | 0 | 55 | 2 | 0 | 57 | 0 | 107 | 26 | 0 | 133 | 36 | 0 | 0 | 0 | 36 | 0 | 0 | 1 | 0 | 1 |
| 0730 - 0745 | 0 | 82 | 0 | 0 | 82 | 0 | 102 | 27 | 0 | 129 | 40 | 0 | 0 | 0 | 40 | 0 | 0 | 1 | 0 | 1 |
| 0745 - 0800 | 0 | 54 | 1 | 0 | 55 | 1 | 101 | 33 | 0 | 135 | 41 | 0 | 0 | 0 | 41 | 0 | 0 | 1 | 0 | 1 |
| Hourly Total | 0 | 248 | 3 | 0 | 251 | 1 | 386 | 101 | 0 | 488 | 145 | 0 | 0 | 0 | 145 | 1 | 0 | 3 | 0 | 4 |
| 0800 - 0815 | 0 | 52 | 0 | 0 | 52 | 0 | 84 | 22 | 0 | 106 | 30 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 42 | 0 | 0 | 42 | 0 | 100 | 20 | 0 | 120 | 20 | 0 | 0 | 0 | 20 | 0 | 1 | 0 | 0 | 1 |
| 0830 - 0845 | 0 | 42 | 0 | 0 | 42 | 1 | 67 | 28 | 0 | 96 | 18 | 1 | 0 | 0 | 19 | 2 | 1 | 0 | 0 | 3 |
| 0845 - 0900 | 0 | 42 | 0 | 0 | 42 | 0 | 107 | 19 | 0 | 126 | 12 | 1 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 178 | 0 | 0 | 178 | 1 | 358 | 89 | 0 | 448 | 80 | 2 | 0 | 0 | 82 | 2 | 2 | 0 | 0 | 4 |
| Grand Total | 0 | 426 | 3 | 0 | 429 | 2 | 744 | 190 | 0 | 936 | 225 | 2 | 0 | 0 | 227 | 3 | 2 | 3 | 0 | 8 |
| Approach % | 0.00 | 99.30 | 0.70 | 0.00 | - | 0.21 | 79.49 | 20.30 | 0.00 | - | 99.12 | 0.88 | 0.00 | 0.00 | - | 37.50 | 25.00 | 37.50 | 0.00 | - |
| Intersection % | 0.00 | 26.63 | 0.19 | 0.00 | 26.81 | 0.13 | 46.50 | 11.88 | 0.00 | 58.50 | 14.06 | 0.13 | 0.00 | 0.00 | 14.19 | 0.19 | 0.13 | 0.19 | 0.00 | 0.50 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 1600 - 1615 | 0 | 83 | 0 | 0 | 83 | 2 | 98 | 29 | 0 | 129 | 20 | 3 | 0 | 0 | 23 | 1 | 0 | 1 | 0 | 2 |
| 1615 - 1630 | 1 | 85 | 0 | 0 | 86 | 3 | 89 | 42 | 0 | 134 | 34 | 2 | 1 | 0 | 37 | 0 | 1 | 2 | 0 | 3 |
| 1630 - 1645 | 0 | 85 | 1 | 0 | 86 | 2 | 81 | 28 | 0 | 111 | 21 | 3 | 0 | 0 | 24 | 2 | 0 | 1 | 0 | 3 |
| 1645 - 1700 | 1 | 81 | 2 | 0 | 84 | 2 | 75 | 33 | 0 | 110 | 24 | 0 | 0 | 0 | 24 | 1 | 0 | 1 | 0 | 2 |
| Hourly Total | 2 | 334 | 3 | 0 | 339 | 9 | 343 | 132 | 0 | 484 | 99 | 8 | 1 | 0 | 108 | 4 | 1 | 5 | 0 | 10 |
| 1700 - 1715 | 0 | 94 | 0 | 0 | 94 | 1 | 88 | 38 | 0 | 127 | 23 | 1 | 0 | 0 | 24 | 0 | 0 | 2 | 0 | 2 |
| 1715 - 1730 | 0 | 111 | 2 | 0 | 113 | 0 | 98 | 54 | 0 | 152 | 36 | 2 | 0 | 0 | 38 | 1 | 1 | 3 | 0 | 5 |
| 1730 - 1745 | 0 | 106 | 0 | 0 | 106 | 2 | 105 | 43 | 0 | 150 | 25 | 0 | 1 | 0 | 26 | 2 | 0 | 1 | 0 | 3 |
| 1745 - 1800 | 1 | 108 | 0 | 0 | 109 | 0 | 105 | 55 | 0 | 160 | 30 | 1 | 1 | 0 | 32 | 0 | 2 | 1 | 0 | 3 |
| Hourly Total | 1 | 419 | 2 | 0 | 422 | 3 | 396 | 190 | 0 | 589 | 114 | 4 | 2 | 0 | 120 | 3 | 3 | 7 | 0 | 13 |
| Grand Total | 3 | 753 | 5 | 0 | 761 | 12 | 739 | 322 | 0 | 1073 | 213 | 12 | 3 | 0 | 228 | 7 | 4 | 12 | 0 | 23 |
| Approach % | 0.39 | 98.95 | 0.66 | 0.00 | - | 1.12 | 68.87 | 30.01 | 0.00 | - | 93.42 | 5.26 | 1.32 | 0.00 | - | 30.43 | 17.39 | 52.17 | 0.00 | - |
| Intersection % | 0.14 | 36.12 | 0.24 | 0.00 | 36.50 | 0.58 | 35.44 | 15.44 | 0.00 | 51.46 | 10.22 | 0.58 | 0.14 | 0.00 | 10.94 | 0.34 | 0.19 | 0.58 | 0.00 | 1.10 |

Canton, GA
Classified Turn Movement Count

Site 13 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Avery Rd
Thomas Rd

Lat/Long
34.206888°, -84.407440°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 0700 - 0715 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 2 | 1 | 0 | 3 | 0 | 1 | 2 | 0 | 3 | 9 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 5 | 0 | 0 | 5 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 6 | 0 | 0 | 6 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 3 | 0 | 0 | 3 | 0 | 10 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 1 | 0 | 0 | 1 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 15 | 0 | 0 | 15 | 0 | 36 | 1 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 17 | 1 | 0 | 18 | 0 | 37 | 3 | 0 | 40 | 9 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.00 | 94.44 | 5.56 | 0.00 | - | 0.00 | 92.50 | 7.50 | 0.00 | - | 100.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 25.37 | 1.49 | 0.00 | 26.87 | 0.00 | 55.22 | 4.48 | 0.00 | 59.70 | 13.43 | 0.00 | 0.00 | 0.00 | 13.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

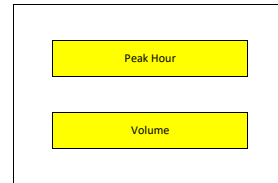
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Avery Rd | | | | | Thomas Rd | | | | |
| | Left 13.1 | Thru 13.2 | Right 13.3 | U-Turn 13.4 | App Total | Left 13.5 | Thru 13.6 | Right 13.7 | U-Turn 13.8 | App Total | Left 13.9 | Thru 13.10 | Right 13.11 | U-Turn 13.12 | App Total | Left 13.13 | Thru 13.14 | Right 13.15 | U-Turn 13.16 | App Total |
| 1600 - 1615 | 0 | 2 | 0 | 0 | 2 | 0 | 7 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 2 | 1 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 2 | 0 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 1 | 0 | 0 | 1 | 0 | 7 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 7 | 1 | 0 | 8 | 0 | 21 | 4 | 0 | 25 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 4 | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 4 | 0 | 12 | 10 | 1 | 0 | 0 | 11 | 0 | 0 | 1 | 0 | 1 |
| Grand Total | 0 | 8 | 1 | 0 | 9 | 0 | 29 | 8 | 0 | 37 | 15 | 1 | 0 | 0 | 16 | 0 | 0 | 1 | 0 | 1 |
| Approach % | 0.00 | 88.89 | 11.11 | 0.00 | - | 0.00 | 78.38 | 21.62 | 0.00 | - | 93.75 | 6.25 | 0.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - |
| Intersection % | 0.00 | 12.70 | 1.59 | 0.00 | 14.29 | 0.00 | 46.03 | 12.70 | 0.00 | 58.73 | 23.81 | 1.59 | 0.00 | 0.00 | 25.40 | 0.00 | 0.00 | 1.59 | 0.00 | 1.59 |

Canton, GA
Peak Hour Turning Movement Count



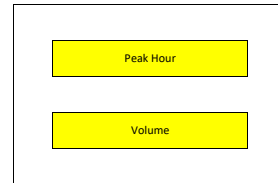
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0715 - 0815 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 14 of 23
Union Hill Rd (South)
Union Hill Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.212154°, -84.396508°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 0700 - 0715 | 7 | 14 | 30 | 0 | 51 | 46 | 33 | 15 | 0 | 94 | 14 | 75 | 9 | 0 | 98 | 20 | 78 | 34 | 0 | 132 |
| 0715 - 0730 | 6 | 23 | 45 | 0 | 74 | 69 | 40 | 14 | 0 | 123 | 9 | 70 | 24 | 0 | 103 | 34 | 104 | 48 | 0 | 186 |
| 0730 - 0745 | 12 | 20 | 10 | 0 | 42 | 23 | 31 | 12 | 0 | 66 | 13 | 83 | 28 | 0 | 124 | 36 | 100 | 39 | 0 | 175 |
| 0745 - 0800 | 12 | 14 | 2 | 0 | 28 | 27 | 35 | 23 | 0 | 85 | 11 | 76 | 22 | 0 | 109 | 3 | 96 | 18 | 0 | 117 |
| Hourly Total | 37 | 71 | 87 | 0 | 195 | 165 | 139 | 64 | 0 | 368 | 47 | 304 | 83 | 0 | 434 | 93 | 378 | 139 | 0 | 610 |
| 0800 - 0815 | 8 | 12 | 6 | 0 | 26 | 21 | 16 | 14 | 0 | 51 | 9 | 62 | 20 | 0 | 91 | 5 | 97 | 17 | 0 | 119 |
| 0815 - 0830 | 9 | 10 | 3 | 0 | 22 | 5 | 30 | 24 | 0 | 59 | 14 | 41 | 23 | 0 | 78 | 3 | 86 | 27 | 0 | 116 |
| 0830 - 0845 | 7 | 7 | 1 | 0 | 15 | 7 | 27 | 15 | 0 | 49 | 10 | 40 | 16 | 0 | 66 | 2 | 96 | 26 | 0 | 124 |
| 0845 - 0900 | 8 | 9 | 1 | 0 | 18 | 8 | 28 | 13 | 0 | 49 | 5 | 37 | 15 | 0 | 57 | 0 | 103 | 7 | 0 | 110 |
| Hourly Total | 32 | 38 | 11 | 0 | 81 | 41 | 101 | 66 | 0 | 208 | 38 | 180 | 74 | 0 | 292 | 10 | 382 | 77 | 0 | 469 |
| Grand Total | 69 | 109 | 98 | 0 | 276 | 206 | 240 | 130 | 0 | 576 | 85 | 484 | 157 | 0 | 726 | 103 | 760 | 216 | 0 | 1079 |
| Approach % | 25.00 | 39.49 | 35.51 | 0.00 | - | 35.76 | 41.67 | 22.57 | 0.00 | - | 11.71 | 66.67 | 21.63 | 0.00 | - | 9.55 | 70.44 | 20.02 | 0.00 | - |
| Intersection % | 2.60 | 4.10 | 3.69 | 0.00 | 10.39 | 7.75 | 9.03 | 4.89 | 0.00 | 21.68 | 3.20 | 18.22 | 5.91 | 0.00 | 27.32 | 3.88 | 28.60 | 8.13 | 0.00 | 40.61 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 1600 - 1615 | 22 | 22 | 3 | 0 | 47 | 13 | 16 | 12 | 0 | 41 | 17 | 82 | 5 | 0 | 104 | 4 | 104 | 10 | 0 | 118 |
| 1615 - 1630 | 21 | 30 | 5 | 0 | 56 | 15 | 16 | 27 | 0 | 58 | 18 | 89 | 13 | 0 | 120 | 8 | 84 | 24 | 0 | 116 |
| 1630 - 1645 | 19 | 18 | 7 | 0 | 44 | 18 | 11 | 16 | 0 | 45 | 21 | 83 | 8 | 0 | 112 | 2 | 82 | 10 | 0 | 94 |
| 1645 - 1700 | 22 | 27 | 4 | 0 | 53 | 16 | 21 | 16 | 0 | 53 | 14 | 90 | 7 | 0 | 111 | 3 | 81 | 8 | 0 | 92 |
| Hourly Total | 84 | 97 | 19 | 0 | 200 | 62 | 64 | 71 | 0 | 197 | 70 | 344 | 33 | 0 | 447 | 17 | 351 | 52 | 0 | 420 |
| 1700 - 1715 | 32 | 31 | 5 | 0 | 68 | 19 | 17 | 14 | 0 | 50 | 15 | 97 | 12 | 0 | 124 | 4 | 80 | 14 | 0 | 98 |
| 1715 - 1730 | 53 | 39 | 6 | 0 | 98 | 23 | 20 | 26 | 0 | 69 | 14 | 113 | 14 | 0 | 141 | 1 | 77 | 13 | 0 | 91 |
| 1730 - 1745 | 33 | 41 | 14 | 0 | 88 | 15 | 15 | 21 | 0 | 51 | 21 | 103 | 8 | 0 | 132 | 3 | 88 | 10 | 0 | 101 |
| 1745 - 1800 | 54 | 38 | 6 | 0 | 98 | 15 | 19 | 18 | 0 | 52 | 17 | 102 | 10 | 0 | 129 | 3 | 97 | 15 | 0 | 115 |
| Hourly Total | 172 | 149 | 31 | 0 | 352 | 72 | 71 | 79 | 0 | 222 | 67 | 415 | 44 | 0 | 526 | 11 | 342 | 52 | 0 | 405 |
| Grand Total | 256 | 246 | 50 | 0 | 552 | 134 | 135 | 150 | 0 | 419 | 137 | 759 | 77 | 0 | 973 | 28 | 693 | 104 | 0 | 825 |
| Approach % | 46.38 | 44.57 | 9.06 | 0.00 | - | 31.98 | 32.22 | 35.80 | 0.00 | - | 14.08 | 78.01 | 7.91 | 0.00 | - | 3.39 | 84.00 | 12.61 | 0.00 | - |
| Intersection % | 9.25 | 8.88 | 1.81 | 0.00 | 19.93 | 4.84 | 4.88 | 5.42 | 0.00 | 15.13 | 4.95 | 27.41 | 2.78 | 0.00 | 35.14 | 1.01 | 25.03 | 3.76 | 0.00 | 29.79 |

Canton, GA
Classified Turn Movement Count

Site 14 of 23
Union Hill Rd (South)
Union Hill Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.212154°, -84.396508°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 0700 - 0715 | 7 | 10 | 29 | 0 | 46 | 45 | 30 | 15 | 0 | 90 | 12 | 74 | 8 | 0 | 94 | 20 | 77 | 32 | 0 | 129 |
| 0715 - 0730 | 6 | 20 | 44 | 0 | 70 | 64 | 38 | 14 | 0 | 116 | 9 | 70 | 22 | 0 | 101 | 34 | 104 | 44 | 0 | 182 |
| 0730 - 0745 | 12 | 20 | 10 | 0 | 42 | 20 | 30 | 12 | 0 | 62 | 13 | 82 | 26 | 0 | 121 | 36 | 100 | 39 | 0 | 175 |
| 0745 - 0800 | 12 | 14 | 1 | 0 | 27 | 26 | 35 | 23 | 0 | 84 | 11 | 74 | 21 | 0 | 106 | 3 | 94 | 18 | 0 | 115 |
| Hourly Total | 37 | 64 | 84 | 0 | 185 | 155 | 133 | 64 | 0 | 352 | 45 | 300 | 77 | 0 | 422 | 93 | 375 | 133 | 0 | 601 |
| 0800 - 0815 | 8 | 12 | 6 | 0 | 26 | 20 | 16 | 9 | 0 | 45 | 9 | 58 | 20 | 0 | 87 | 5 | 94 | 14 | 0 | 113 |
| 0815 - 0830 | 8 | 10 | 3 | 0 | 21 | 5 | 28 | 18 | 0 | 51 | 14 | 36 | 23 | 0 | 73 | 2 | 81 | 19 | 0 | 102 |
| 0830 - 0845 | 7 | 6 | 1 | 0 | 14 | 7 | 27 | 10 | 0 | 44 | 10 | 37 | 16 | 0 | 63 | 2 | 91 | 19 | 0 | 112 |
| 0845 - 0900 | 8 | 9 | 1 | 0 | 18 | 7 | 27 | 6 | 0 | 40 | 5 | 34 | 15 | 0 | 54 | 0 | 103 | 7 | 0 | 110 |
| Hourly Total | 31 | 37 | 11 | 0 | 79 | 39 | 98 | 43 | 0 | 180 | 38 | 165 | 74 | 0 | 277 | 9 | 369 | 59 | 0 | 437 |
| Grand Total | 68 | 101 | 95 | 0 | 264 | 194 | 231 | 107 | 0 | 532 | 83 | 465 | 151 | 0 | 699 | 102 | 744 | 192 | 0 | 1038 |
| Approach % | 25.76 | 38.26 | 35.98 | 0.00 | - | 36.47 | 43.42 | 20.11 | 0.00 | - | 11.87 | 66.52 | 21.60 | 0.00 | - | 9.83 | 71.68 | 18.50 | 0.00 | - |
| Intersection % | 2.68 | 3.99 | 3.75 | 0.00 | 10.42 | 7.66 | 9.12 | 4.22 | 0.00 | 21.00 | 3.28 | 18.36 | 5.96 | 0.00 | 27.60 | 4.03 | 29.37 | 7.58 | 0.00 | 40.98 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|----------------------|-------|-------|--------|-----------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 1600 - 1615 | 22 | 22 | 2 | 0 | 46 | 13 | 16 | 11 | 0 | 40 | 17 | 79 | 5 | 0 | 101 | 4 | 102 | 7 | 0 | 113 |
| 1615 - 1630 | 21 | 28 | 5 | 0 | 54 | 15 | 16 | 22 | 0 | 53 | 15 | 88 | 12 | 0 | 115 | 8 | 82 | 21 | 0 | 111 |
| 1630 - 1645 | 18 | 18 | 6 | 0 | 42 | 18 | 11 | 13 | 0 | 42 | 21 | 81 | 8 | 0 | 110 | 2 | 80 | 8 | 0 | 90 |
| 1645 - 1700 | 22 | 25 | 4 | 0 | 51 | 16 | 21 | 12 | 0 | 49 | 14 | 88 | 7 | 0 | 109 | 3 | 76 | 8 | 0 | 87 |
| Hourly Total | 83 | 93 | 17 | 0 | 193 | 62 | 64 | 58 | 0 | 184 | 67 | 336 | 32 | 0 | 435 | 17 | 340 | 44 | 0 | 401 |
| 1700 - 1715 | 31 | 31 | 4 | 0 | 66 | 19 | 16 | 12 | 0 | 47 | 14 | 97 | 10 | 0 | 121 | 4 | 80 | 14 | 0 | 98 |
| 1715 - 1730 | 52 | 38 | 6 | 0 | 96 | 23 | 20 | 23 | 0 | 66 | 14 | 113 | 11 | 0 | 138 | 1 | 77 | 13 | 0 | 91 |
| 1730 - 1745 | 33 | 40 | 14 | 0 | 87 | 15 | 14 | 19 | 0 | 48 | 21 | 103 | 7 | 0 | 131 | 2 | 87 | 10 | 0 | 99 |
| 1745 - 1800 | 53 | 38 | 6 | 0 | 97 | 15 | 19 | 17 | 0 | 51 | 16 | 102 | 7 | 0 | 125 | 3 | 97 | 15 | 0 | 115 |
| Hourly Total | 169 | 147 | 30 | 0 | 346 | 72 | 69 | 71 | 0 | 212 | 65 | 415 | 35 | 0 | 515 | 10 | 341 | 52 | 0 | 403 |
| Grand Total | 252 | 240 | 47 | 0 | 539 | 134 | 133 | 129 | 0 | 396 | 132 | 751 | 67 | 0 | 950 | 27 | 681 | 96 | 0 | 804 |
| Approach % | 46.75 | 44.53 | 8.72 | 0.00 | - | 33.84 | 33.59 | 32.58 | 0.00 | - | 13.89 | 79.05 | 7.05 | 0.00 | - | 3.36 | 84.70 | 11.94 | 0.00 | - |
| Intersection % | 9.37 | 8.93 | 1.75 | 0.00 | 20.04 | 4.98 | 4.95 | 4.80 | 0.00 | 14.73 | 4.91 | 27.93 | 2.49 | 0.00 | 35.33 | 1.00 | 25.33 | 3.57 | 0.00 | 29.90 |

Canton, GA
Classified Turn Movement Count

Site 14 of 23
Union Hill Rd (South)
Union Hill Rd (North)
E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.212154°, -84.396508°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|----------------------|---------------|----------------|-----------------|--------------|----------------------|---------------|----------------|-----------------|--------------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 14.1 | Thru 14.2 | Right 14.3 | U-Turn 14.4 | App Total | Left 14.5 | Thru 14.6 | Right 14.7 | U-Turn 14.8 | App Total | Left 14.9 | Thru 14.10 | Right 14.11 | U-Turn 14.12 | App Total | Left 14.13 | Thru 14.14 | Right 14.15 | U-Turn 14.16 | App Total |
| 0700 - 0715 | 0 | 4 | 1 | 0 | 5 | 1 | 3 | 0 | 0 | 4 | 2 | 1 | 1 | 0 | 4 | 0 | 1 | 2 | 0 | 3 |
| 0715 - 0730 | 0 | 3 | 1 | 0 | 4 | 5 | 2 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 4 | 0 | 4 |
| 0730 - 0745 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 4 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 3 | 0 | 2 | 0 | 0 | 2 |
| Hourly Total | 0 | 7 | 3 | 0 | 10 | 10 | 6 | 0 | 0 | 16 | 2 | 4 | 6 | 0 | 12 | 0 | 3 | 6 | 0 | 9 |
| 0800 - 0815 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 6 | 0 | 4 | 0 | 0 | 4 | 0 | 3 | 3 | 0 | 6 |
| 0815 - 0830 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 6 | 0 | 8 | 0 | 5 | 0 | 0 | 5 | 1 | 5 | 8 | 0 | 14 |
| 0830 - 0845 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 | 0 | 3 | 0 | 0 | 3 | 0 | 5 | 7 | 0 | 12 |
| 0845 - 0900 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 7 | 0 | 9 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 23 | 0 | 28 | 0 | 15 | 0 | 0 | 15 | 1 | 13 | 18 | 0 | 32 |
| Grand Total | 1 | 8 | 3 | 0 | 12 | 12 | 9 | 23 | 0 | 44 | 2 | 19 | 6 | 0 | 27 | 1 | 16 | 24 | 0 | 41 |
| Approach % | 8.33 | 66.67 | 25.00 | 0.00 | - | 27.27 | 20.45 | 52.27 | 0.00 | - | 7.41 | 70.37 | 22.22 | 0.00 | - | 2.44 | 39.02 | 58.54 | 0.00 | - |
| Intersection % | 0.81 | 6.45 | 2.42 | 0.00 | 9.68 | 9.68 | 7.26 | 18.55 | 0.00 | 35.48 | 1.61 | 15.32 | 4.84 | 0.00 | 21.77 | 0.81 | 12.90 | 19.35 | 0.00 | 33.06 |

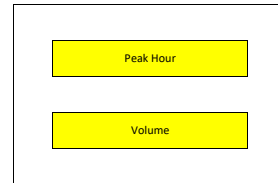
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|----------------------|---------------|----------------|-----------------|--------------|----------------------|---------------|----------------|-----------------|--------------|
| | Union Hill Rd (South) | | | | | Union Hill Rd (North) | | | | | E Cherokee Dr (West) | | | | | E Cherokee Dr (East) | | | | |
| | Left 14.1 | Thru 14.2 | Right 14.3 | U-Turn 14.4 | App Total | Left 14.5 | Thru 14.6 | Right 14.7 | U-Turn 14.8 | App Total | Left 14.9 | Thru 14.10 | Right 14.11 | U-Turn 14.12 | App Total | Left 14.13 | Thru 14.14 | Right 14.15 | U-Turn 14.16 | App Total |
| 1600 - 1615 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 3 | 0 | 5 |
| 1615 - 1630 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 5 | 3 | 1 | 1 | 0 | 5 | 0 | 2 | 3 | 0 | 5 |
| 1630 - 1645 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 4 |
| 1645 - 1700 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 5 |
| Hourly Total | 1 | 4 | 2 | 0 | 7 | 0 | 0 | 13 | 0 | 13 | 3 | 8 | 1 | 0 | 12 | 0 | 11 | 8 | 0 | 19 |
| 1700 - 1715 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 3 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 2 |
| 1745 - 1800 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 3 | 2 | 1 | 0 | 6 | 0 | 2 | 8 | 0 | 10 | 2 | 0 | 9 | 0 | 11 | 1 | 1 | 0 | 0 | 2 |
| Grand Total | 4 | 6 | 3 | 0 | 13 | 0 | 2 | 21 | 0 | 23 | 5 | 8 | 10 | 0 | 23 | 1 | 12 | 8 | 0 | 21 |
| Approach % | 30.77 | 46.15 | 23.08 | 0.00 | - | 0.00 | 8.70 | 91.30 | 0.00 | - | 21.74 | 34.78 | 43.48 | 0.00 | - | 4.76 | 57.14 | 38.10 | 0.00 | - |
| Intersection % | 5.00 | 7.50 | 3.75 | 0.00 | 16.25 | 0.00 | 2.50 | 26.25 | 0.00 | 28.75 | 6.25 | 10.00 | 12.50 | 0.00 | 28.75 | 1.25 | 15.00 | 10.00 | 0.00 | 26.25 |

Canton, GA
Peak Hour Turning Movement Count



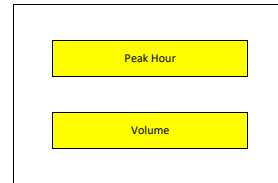
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0700 - 0800 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 15 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Johnson Brady Rd
Local Access

Lat/Long
34.221158°, -84.379224°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|------------------|-------|-------|--------|-----------|--------------|-------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 15.1 | 15.2 | 15.3 | 15.4 | Total | 15.5 | 15.6 | 15.7 | 15.8 | Total | 15.9 | 15.10 | 15.11 | 15.12 | Total | 15.13 | 15.14 | 15.15 | 15.16 | Total | |
| 0700 - 0715 | 3 | 49 | 0 | 0 | 52 | 0 | 81 | 0 | 0 | 81 | 1 | 0 | 5 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 3 | 84 | 0 | 0 | 87 | 0 | 95 | 0 | 0 | 95 | 1 | 0 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 4 | 139 | 0 | 0 | 143 | 0 | 88 | 1 | 0 | 89 | 3 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 1 | 133 | 0 | 0 | 134 | 0 | 105 | 0 | 0 | 105 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 11 | 405 | 0 | 0 | 416 | 0 | 369 | 1 | 0 | 370 | 6 | 0 | 17 | 0 | 23 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 99 | 0 | 0 | 99 | 0 | 106 | 0 | 0 | 106 | 2 | 0 | 7 | 0 | 9 | 0 | 0 | 1 | 0 | 1 |
| 0815 - 0830 | 2 | 64 | 0 | 0 | 66 | 0 | 126 | 0 | 0 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 2 | 43 | 0 | 0 | 45 | 0 | 114 | 1 | 0 | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 0845 - 0900 | 1 | 54 | 0 | 0 | 55 | 0 | 98 | 0 | 0 | 98 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 5 | 260 | 0 | 0 | 265 | 0 | 444 | 1 | 0 | 445 | 2 | 0 | 10 | 0 | 12 | 0 | 1 | 1 | 0 | 2 |
| Grand Total | 16 | 665 | 0 | 0 | 681 | 0 | 813 | 2 | 0 | 815 | 8 | 0 | 27 | 0 | 35 | 0 | 1 | 1 | 0 | 2 |
| Approach % | 2.35 | 97.65 | 0.00 | 0.00 | - | 0.00 | 99.75 | 0.25 | 0.00 | - | 22.86 | 0.00 | 77.14 | 0.00 | - | 0.00 | 50.00 | 50.00 | 0.00 | - |
| Intersection % | 1.04 | 43.38 | 0.00 | 0.00 | 44.42 | 0.00 | 53.03 | 0.13 | 0.00 | 53.16 | 0.52 | 0.00 | 1.76 | 0.00 | 2.28 | 0.00 | 0.07 | 0.07 | 0.00 | 0.13 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|-------|-------|--------|-----------|-----------------------|-------|-------|--------|-----------|------------------|-------|-------|--------|-----------|--------------|-------|-------|--------|-----------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total |
| 15.1 | 15.2 | 15.3 | 15.4 | Total | 15.5 | 15.6 | 15.7 | 15.8 | Total | 15.9 | 15.10 | 15.11 | 15.12 | Total | 15.13 | 15.14 | 15.15 | 15.16 | Total | |
| 1600 - 1615 | 2 | 89 | 0 | 0 | 91 | 0 | 98 | 1 | 0 | 99 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 4 | 90 | 1 | 0 | 95 | 0 | 86 | 0 | 0 | 86 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 6 | 83 | 0 | 0 | 89 | 0 | 95 | 2 | 0 | 97 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 3 | 101 | 0 | 0 | 104 | 0 | 79 | 1 | 0 | 80 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 15 | 363 | 1 | 0 | 379 | 0 | 358 | 4 | 0 | 362 | 3 | 0 | 8 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 1 | 107 | 0 | 0 | 108 | 0 | 85 | 1 | 0 | 86 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 2 | 134 | 0 | 0 | 136 | 0 | 75 | 1 | 0 | 76 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 6 | 111 | 0 | 0 | 117 | 0 | 110 | 2 | 0 | 112 | 4 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 3 | 104 | 0 | 0 | 107 | 0 | 94 | 0 | 0 | 94 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 12 | 456 | 0 | 0 | 468 | 0 | 364 | 4 | 0 | 368 | 5 | 0 | 10 | 0 | 15 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 27 | 819 | 1 | 0 | 847 | 0 | 722 | 8 | 0 | 730 | 8 | 0 | 18 | 0 | 26 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 3.19 | 96.69 | 0.12 | 0.00 | - | 0.00 | 98.90 | 1.10 | 0.00 | - | 30.77 | 0.00 | 69.23 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 1.68 | 51.09 | 0.06 | 0.00 | 52.84 | 0.00 | 45.04 | 0.50 | 0.00 | 45.54 | 0.50 | 0.00 | 1.12 | 0.00 | 1.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Classified Turn Movement Count

Site 15 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Johnson Brady Rd
Local Access

Lat/Long
34.221158°, -84.379224°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|------------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left 15.1 | Thru 15.2 | Right 15.3 | U-Turn 15.4 | App Total | Left 15.5 | Thru 15.6 | Right 15.7 | U-Turn 15.8 | App Total | Left 15.9 | Thru 15.10 | Right 15.11 | U-Turn 15.12 | App Total | Left 15.13 | Thru 15.14 | Right 15.15 | U-Turn 15.16 | App Total |
| 0700 - 0715 | 2 | 47 | 0 | 0 | 49 | 0 | 80 | 0 | 0 | 80 | 1 | 0 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 3 | 81 | 0 | 0 | 84 | 0 | 94 | 0 | 0 | 94 | 1 | 0 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 4 | 138 | 0 | 0 | 142 | 0 | 87 | 1 | 0 | 88 | 3 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 127 | 0 | 0 | 127 | 0 | 104 | 0 | 0 | 104 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 9 | 393 | 0 | 0 | 402 | 0 | 365 | 1 | 0 | 366 | 6 | 0 | 16 | 0 | 22 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 94 | 0 | 0 | 94 | 0 | 98 | 0 | 0 | 98 | 2 | 0 | 7 | 0 | 9 | 0 | 0 | 1 | 0 | 1 |
| 0815 - 0830 | 2 | 58 | 0 | 0 | 60 | 0 | 110 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 2 | 39 | 0 | 0 | 41 | 0 | 106 | 1 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 0845 - 0900 | 1 | 51 | 0 | 0 | 52 | 0 | 98 | 0 | 0 | 98 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 5 | 242 | 0 | 0 | 247 | 0 | 412 | 1 | 0 | 413 | 2 | 0 | 10 | 0 | 12 | 0 | 1 | 1 | 0 | 2 |
| Grand Total | 14 | 635 | 0 | 0 | 649 | 0 | 777 | 2 | 0 | 779 | 8 | 0 | 26 | 0 | 34 | 0 | 1 | 1 | 0 | 2 |
| Approach % | 2.16 | 97.84 | 0.00 | 0.00 | - | 0.00 | 99.74 | 0.26 | 0.00 | - | 23.53 | 0.00 | 76.47 | 0.00 | - | 0.00 | 50.00 | 50.00 | 0.00 | - |
| Intersection % | 0.96 | 43.37 | 0.00 | 0.00 | 44.33 | 0.00 | 53.07 | 0.14 | 0.00 | 53.21 | 0.55 | 0.00 | 1.78 | 0.00 | 2.32 | 0.00 | 0.07 | 0.07 | 0.00 | 0.14 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|------------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left 15.1 | Thru 15.2 | Right 15.3 | U-Turn 15.4 | App Total | Left 15.5 | Thru 15.6 | Right 15.7 | U-Turn 15.8 | App Total | Left 15.9 | Thru 15.10 | Right 15.11 | U-Turn 15.12 | App Total | Left 15.13 | Thru 15.14 | Right 15.15 | U-Turn 15.16 | App Total |
| 1600 - 1615 | 1 | 85 | 0 | 0 | 86 | 0 | 91 | 1 | 0 | 92 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 4 | 90 | 1 | 0 | 95 | 0 | 82 | 0 | 0 | 82 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 5 | 81 | 0 | 0 | 86 | 0 | 90 | 2 | 0 | 92 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 3 | 100 | 0 | 0 | 103 | 0 | 77 | 1 | 0 | 78 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 13 | 356 | 1 | 0 | 370 | 0 | 340 | 4 | 0 | 344 | 3 | 0 | 8 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 1 | 107 | 0 | 0 | 108 | 0 | 84 | 1 | 0 | 85 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 2 | 134 | 0 | 0 | 136 | 0 | 75 | 1 | 0 | 76 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 6 | 111 | 0 | 0 | 117 | 0 | 110 | 2 | 0 | 112 | 4 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 3 | 104 | 0 | 0 | 107 | 0 | 94 | 0 | 0 | 94 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 12 | 456 | 0 | 0 | 468 | 0 | 363 | 4 | 0 | 367 | 5 | 0 | 10 | 0 | 15 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 25 | 812 | 1 | 0 | 838 | 0 | 703 | 8 | 0 | 711 | 8 | 0 | 18 | 0 | 26 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 2.98 | 96.90 | 0.12 | 0.00 | - | 0.00 | 98.87 | 1.13 | 0.00 | - | 30.77 | 0.00 | 69.23 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 1.59 | 51.56 | 0.06 | 0.00 | 53.21 | 0.00 | 44.63 | 0.51 | 0.00 | 45.14 | 0.51 | 0.00 | 1.14 | 0.00 | 1.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Classified Turn Movement Count

Site 15 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Johnson Brady Rd
Local Access

Lat/Long
34.221158°, -84.379224°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|------------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left 15.1 | Thru 15.2 | Right 15.3 | U-Turn 15.4 | App Total | Left 15.5 | Thru 15.6 | Right 15.7 | U-Turn 15.8 | App Total | Left 15.9 | Thru 15.10 | Right 15.11 | U-Turn 15.12 | App Total | Left 15.13 | Thru 15.14 | Right 15.15 | U-Turn 15.16 | App Total |
| 0700 - 0715 | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 1 | 6 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 2 | 12 | 0 | 0 | 14 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 5 | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 6 | 0 | 0 | 6 | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 4 | 0 | 0 | 4 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 18 | 0 | 0 | 18 | 0 | 32 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 2 | 30 | 0 | 0 | 32 | 0 | 36 | 0 | 0 | 36 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 6.25 | 93.75 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 100.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 2.90 | 43.48 | 0.00 | 0.00 | 46.38 | 0.00 | 52.17 | 0.00 | 0.00 | 52.17 | 0.00 | 0.00 | 1.45 | 0.00 | 1.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

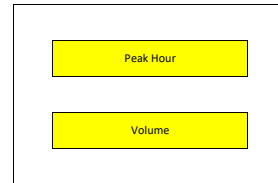
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|------------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Johnson Brady Rd | | | | | Local Access | | | | |
| | Left 15.1 | Thru 15.2 | Right 15.3 | U-Turn 15.4 | App Total | Left 15.5 | Thru 15.6 | Right 15.7 | U-Turn 15.8 | App Total | Left 15.9 | Thru 15.10 | Right 15.11 | U-Turn 15.12 | App Total | Left 15.13 | Thru 15.14 | Right 15.15 | U-Turn 15.16 | App Total |
| 1600 - 1615 | 1 | 4 | 0 | 0 | 5 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 1 | 2 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 2 | 7 | 0 | 0 | 9 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 2 | 7 | 0 | 0 | 9 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 22.22 | 77.78 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 7.14 | 25.00 | 0.00 | 0.00 | 32.14 | 0.00 | 67.86 | 0.00 | 0.00 | 67.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Peak Hour Turning Movement Count



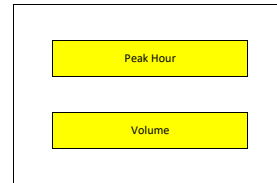
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 16 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Beavers Rd
Local Access

Lat/Long
34.230317°, -84.368047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 0700 - 0715 | 1 | 47 | 0 | 1 | 49 | 0 | 60 | 3 | 0 | 63 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 79 | 0 | 0 | 79 | 0 | 79 | 9 | 0 | 88 | 6 | 0 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 4 | 139 | 0 | 0 | 143 | 0 | 84 | 7 | 0 | 91 | 5 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 135 | 0 | 0 | 135 | 0 | 103 | 9 | 0 | 112 | 11 | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 5 | 400 | 0 | 1 | 406 | 0 | 326 | 28 | 0 | 354 | 23 | 0 | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 1 | 108 | 0 | 0 | 109 | 0 | 94 | 9 | 0 | 103 | 14 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 2 | 68 | 0 | 0 | 70 | 0 | 119 | 5 | 0 | 124 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 3 | 42 | 0 | 0 | 45 | 0 | 106 | 7 | 0 | 113 | 9 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 1 | 48 | 0 | 0 | 49 | 0 | 98 | 9 | 0 | 107 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 7 | 266 | 0 | 0 | 273 | 0 | 417 | 30 | 0 | 447 | 31 | 0 | 3 | 0 | 34 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 12 | 666 | 0 | 1 | 679 | 0 | 743 | 58 | 0 | 801 | 54 | 0 | 15 | 0 | 69 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 1.77 | 98.09 | 0.00 | 0.15 | - | 0.00 | 92.76 | 7.24 | 0.00 | - | 78.26 | 0.00 | 21.74 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.77 | 43.00 | 0.00 | 0.06 | 43.83 | 0.00 | 47.97 | 3.74 | 0.00 | 51.71 | 3.49 | 0.00 | 0.97 | 0.00 | 4.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 1600 - 1615 | 1 | 83 | 0 | 0 | 84 | 0 | 98 | 7 | 0 | 105 | 7 | 0 | 3 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 3 | 74 | 0 | 0 | 77 | 0 | 76 | 1 | 0 | 77 | 10 | 0 | 4 | 0 | 14 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 84 | 0 | 0 | 84 | 0 | 93 | 7 | 0 | 100 | 7 | 0 | 4 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 3 | 97 | 0 | 0 | 100 | 0 | 70 | 5 | 0 | 75 | 7 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 7 | 338 | 0 | 0 | 345 | 0 | 337 | 20 | 0 | 357 | 31 | 0 | 12 | 0 | 43 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 1 | 102 | 0 | 0 | 103 | 0 | 72 | 7 | 0 | 79 | 11 | 0 | 7 | 0 | 18 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 4 | 120 | 0 | 0 | 124 | 0 | 81 | 11 | 0 | 92 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 4 | 120 | 0 | 0 | 124 | 0 | 113 | 3 | 0 | 116 | 10 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 3 | 85 | 0 | 0 | 88 | 0 | 99 | 3 | 0 | 102 | 8 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 12 | 427 | 0 | 0 | 439 | 0 | 365 | 24 | 0 | 389 | 31 | 0 | 9 | 0 | 40 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 19 | 765 | 0 | 0 | 784 | 0 | 702 | 44 | 0 | 746 | 62 | 0 | 21 | 0 | 83 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 2.42 | 97.58 | 0.00 | 0.00 | - | 0.00 | 94.10 | 5.90 | 0.00 | - | 74.70 | 0.00 | 25.30 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 1.18 | 47.43 | 0.00 | 0.00 | 48.61 | 0.00 | 43.52 | 2.73 | 0.00 | 46.25 | 3.84 | 0.00 | 1.30 | 0.00 | 5.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Classified Turn Movement Count

Site 16 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Beavers Rd
Local Access

Lat/Long
34.230317°, -84.368047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 0700 - 0715 | 1 | 45 | 0 | 1 | 47 | 0 | 59 | 3 | 0 | 62 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 77 | 0 | 0 | 77 | 0 | 78 | 9 | 0 | 87 | 6 | 0 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 4 | 136 | 0 | 0 | 140 | 0 | 84 | 7 | 0 | 91 | 5 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 130 | 0 | 0 | 130 | 0 | 102 | 9 | 0 | 111 | 11 | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 5 | 388 | 0 | 1 | 394 | 0 | 323 | 28 | 0 | 351 | 23 | 0 | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 1 | 103 | 0 | 0 | 104 | 0 | 86 | 9 | 0 | 95 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 2 | 62 | 0 | 0 | 64 | 0 | 103 | 5 | 0 | 108 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 3 | 38 | 0 | 0 | 41 | 0 | 100 | 7 | 0 | 107 | 8 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 1 | 45 | 0 | 0 | 46 | 0 | 97 | 9 | 0 | 106 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 7 | 248 | 0 | 0 | 255 | 0 | 386 | 30 | 0 | 416 | 29 | 0 | 3 | 0 | 32 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 12 | 636 | 0 | 1 | 649 | 0 | 709 | 58 | 0 | 767 | 52 | 0 | 15 | 0 | 67 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 1.85 | 98.00 | 0.00 | 0.15 | - | 0.00 | 92.44 | 7.56 | 0.00 | - | 77.61 | 0.00 | 22.39 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.81 | 42.89 | 0.00 | 0.07 | 43.76 | 0.00 | 47.81 | 3.91 | 0.00 | 51.72 | 3.51 | 0.00 | 1.01 | 0.00 | 4.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 1600 - 1615 | 1 | 79 | 0 | 0 | 80 | 0 | 92 | 6 | 0 | 98 | 7 | 0 | 3 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 3 | 73 | 0 | 0 | 76 | 0 | 73 | 1 | 0 | 74 | 9 | 0 | 4 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 82 | 0 | 0 | 82 | 0 | 88 | 7 | 0 | 95 | 7 | 0 | 4 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 3 | 97 | 0 | 0 | 100 | 0 | 66 | 5 | 0 | 71 | 7 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 7 | 331 | 0 | 0 | 338 | 0 | 319 | 19 | 0 | 338 | 30 | 0 | 12 | 0 | 42 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 1 | 102 | 0 | 0 | 103 | 0 | 72 | 7 | 0 | 79 | 11 | 0 | 7 | 0 | 18 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 4 | 120 | 0 | 0 | 124 | 0 | 81 | 11 | 0 | 92 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 4 | 120 | 0 | 0 | 124 | 0 | 113 | 3 | 0 | 116 | 9 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 3 | 85 | 0 | 0 | 88 | 0 | 98 | 3 | 0 | 101 | 8 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 12 | 427 | 0 | 0 | 439 | 0 | 364 | 24 | 0 | 388 | 30 | 0 | 9 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 19 | 758 | 0 | 0 | 777 | 0 | 683 | 43 | 0 | 726 | 60 | 0 | 21 | 0 | 81 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 2.45 | 97.55 | 0.00 | 0.00 | - | 0.00 | 94.08 | 5.92 | 0.00 | - | 74.07 | 0.00 | 25.93 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 1.20 | 47.85 | 0.00 | 0.00 | 49.05 | 0.00 | 43.12 | 2.71 | 0.00 | 45.83 | 3.79 | 0.00 | 1.33 | 0.00 | 5.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Canton, GA
Classified Turn Movement Count

Site 16 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Beavers Rd
Local Access

Lat/Long
34.230317°, -84.368047°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

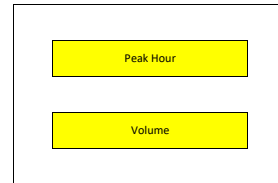
| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 0700 - 0715 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 5 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 12 | 0 | 0 | 12 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 5 | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 6 | 0 | 0 | 6 | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 4 | 0 | 0 | 4 | 0 | 6 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 18 | 0 | 0 | 18 | 0 | 31 | 0 | 0 | 31 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 30 | 0 | 0 | 30 | 0 | 34 | 0 | 0 | 34 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 100.00 | 0.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 45.45 | 0.00 | 0.00 | 45.45 | 0.00 | 51.52 | 0.00 | 0.00 | 51.52 | 3.03 | 0.00 | 0.00 | 0.00 | 3.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------|---------------|----------------|-----------------|--------------|---------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | Beavers Rd | | | | | Local Access | | | | |
| | Left 16.1 | Thru 16.2 | Right 16.3 | U-Turn 16.4 | App Total | Left 16.5 | Thru 16.6 | Right 16.7 | U-Turn 16.8 | App Total | Left 16.9 | Thru 16.10 | Right 16.11 | U-Turn 16.12 | App Total | Left 16.13 | Thru 16.14 | Right 16.15 | U-Turn 16.16 | App Total |
| 1600 - 1615 | 0 | 4 | 0 | 0 | 4 | 0 | 6 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 2 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 7 | 0 | 0 | 7 | 0 | 18 | 1 | 0 | 19 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 7 | 0 | 0 | 7 | 0 | 19 | 1 | 0 | 20 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.00 | 100.00 | 0.00 | 0.00 | - | 0.00 | 95.00 | 5.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 24.14 | 0.00 | 0.00 | 24.14 | 0.00 | 65.52 | 3.45 | 0.00 | 68.97 | 6.90 | 0.00 | 0.00 | 0.00 | 6.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |



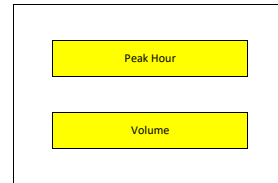
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 17 of 23
Haley Farm Rd

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.231786°, -84.364832°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 0700 - 0715 | 5 | 1 | 0 | 6 |
| 0715 - 0730 | 11 | 1 | 0 | 12 |
| 0730 - 0745 | 2 | 1 | 0 | 3 |
| 0745 - 0800 | 7 | 0 | 0 | 7 |
| Hourly Total | 25 | 3 | 0 | 28 |
| 0800 - 0815 | 4 | 0 | 0 | 4 |
| 0815 - 0830 | 3 | 1 | 0 | 4 |
| 0830 - 0845 | 9 | 0 | 0 | 9 |
| 0845 - 0900 | 9 | 1 | 0 | 10 |
| Hourly Total | 25 | 2 | 0 | 27 |
| Grand Total | 50 | 5 | 0 | 55 |
| Approach % | 90.91 | 9.09 | 0.00 | - |
| Intersection % | 3.26 | 0.33 | 0.00 | 3.59 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 50 | 1 | 0 | 51 | 0 | 60 | 0 | 60 |
| 82 | 2 | 0 | 84 | 3 | 77 | 0 | 80 |
| 136 | 5 | 0 | 141 | 1 | 87 | 0 | 88 |
| 143 | 2 | 0 | 145 | 0 | 105 | 0 | 105 |
| 411 | 10 | 0 | 421 | 4 | 329 | 0 | 333 |
| 124 | 5 | 0 | 129 | 2 | 98 | 0 | 100 |
| 68 | 5 | 0 | 73 | 0 | 120 | 0 | 120 |
| 50 | 2 | 0 | 52 | 1 | 103 | 0 | 104 |
| 45 | 4 | 0 | 49 | 2 | 96 | 0 | 98 |
| 287 | 16 | 0 | 303 | 5 | 417 | 0 | 422 |
| 698 | 26 | 0 | 724 | 9 | 746 | 0 | 755 |
| 96.41 | 3.59 | 0.00 | - | 1.19 | 98.81 | 0.00 | - |
| 45.50 | 1.69 | 0.00 | 47.20 | 0.59 | 48.63 | 0.00 | 49.22 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 1600 - 1615 | 6 | 0 | 0 | 6 |
| 1615 - 1630 | 7 | 1 | 0 | 8 |
| 1630 - 1645 | 9 | 2 | 0 | 11 |
| 1645 - 1700 | 2 | 1 | 0 | 3 |
| Hourly Total | 24 | 4 | 0 | 28 |
| 1700 - 1715 | 3 | 2 | 0 | 5 |
| 1715 - 1730 | 7 | 0 | 0 | 7 |
| 1730 - 1745 | 6 | 0 | 0 | 6 |
| 1745 - 1800 | 13 | 4 | 0 | 17 |
| Hourly Total | 29 | 6 | 0 | 35 |
| Grand Total | 53 | 10 | 0 | 63 |
| Approach % | 84.13 | 15.87 | 0.00 | - |
| Intersection % | 3.33 | 0.63 | 0.00 | 3.96 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 78 | 9 | 0 | 87 | 1 | 94 | 0 | 95 |
| 80 | 7 | 0 | 87 | 0 | 69 | 0 | 69 |
| 85 | 9 | 0 | 94 | 1 | 94 | 0 | 95 |
| 93 | 10 | 0 | 103 | 1 | 70 | 0 | 71 |
| 336 | 35 | 0 | 371 | 3 | 327 | 0 | 330 |
| 106 | 7 | 0 | 113 | 0 | 81 | 0 | 81 |
| 109 | 10 | 0 | 119 | 1 | 86 | 0 | 87 |
| 125 | 8 | 0 | 133 | 2 | 110 | 0 | 112 |
| 84 | 7 | 0 | 91 | 1 | 90 | 0 | 91 |
| 424 | 32 | 0 | 456 | 4 | 367 | 0 | 371 |
| 760 | 67 | 0 | 827 | 7 | 694 | 0 | 701 |
| 91.90 | 8.10 | 0.00 | - | 1.00 | 99.00 | 0.00 | - |
| 47.77 | 4.21 | 0.00 | 51.98 | 0.44 | 43.62 | 0.00 | 44.06 |

Canton, GA
Classified Turn Movement Count

Site 17 of 23
Haley Farm Rd

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.231786°, -84.364832°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 0700 - 0715 | 4 | 0 | 0 | 4 |
| 0715 - 0730 | 11 | 1 | 0 | 12 |
| 0730 - 0745 | 2 | 1 | 0 | 3 |
| 0745 - 0800 | 7 | 0 | 0 | 7 |
| Hourly Total | 24 | 2 | 0 | 26 |
| 0800 - 0815 | 4 | 0 | 0 | 4 |
| 0815 - 0830 | 3 | 1 | 0 | 4 |
| 0830 - 0845 | 9 | 0 | 0 | 9 |
| 0845 - 0900 | 9 | 1 | 0 | 10 |
| Hourly Total | 25 | 2 | 0 | 27 |
| Grand Total | 49 | 4 | 0 | 53 |
| Approach % | 92.45 | 7.55 | 0.00 | - |
| Intersection % | 3.34 | 0.27 | 0.00 | 3.61 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 46 | 1 | 0 | 47 | 0 | 60 | 0 | 60 |
| 79 | 1 | 0 | 80 | 3 | 76 | 0 | 79 |
| 134 | 5 | 0 | 139 | 1 | 86 | 0 | 87 |
| 141 | 2 | 0 | 143 | 0 | 105 | 0 | 105 |
| 400 | 9 | 0 | 409 | 4 | 327 | 0 | 331 |
| 119 | 5 | 0 | 124 | 2 | 90 | 0 | 92 |
| 62 | 5 | 0 | 67 | 0 | 104 | 0 | 104 |
| 46 | 2 | 0 | 48 | 1 | 97 | 0 | 98 |
| 40 | 4 | 0 | 44 | 2 | 95 | 0 | 97 |
| 267 | 16 | 0 | 283 | 5 | 386 | 0 | 391 |
| 667 | 25 | 0 | 692 | 9 | 713 | 0 | 722 |
| 96.39 | 3.61 | 0.00 | - | 1.25 | 98.75 | 0.00 | - |
| 45.47 | 1.70 | 0.00 | 47.17 | 0.61 | 48.60 | 0.00 | 49.22 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 1600 - 1615 | 6 | 0 | 0 | 6 |
| 1615 - 1630 | 7 | 1 | 0 | 8 |
| 1630 - 1645 | 9 | 2 | 0 | 11 |
| 1645 - 1700 | 2 | 1 | 0 | 3 |
| Hourly Total | 24 | 4 | 0 | 28 |
| 1700 - 1715 | 3 | 2 | 0 | 5 |
| 1715 - 1730 | 7 | 0 | 0 | 7 |
| 1730 - 1745 | 6 | 0 | 0 | 6 |
| 1745 - 1800 | 13 | 4 | 0 | 17 |
| Hourly Total | 29 | 6 | 0 | 35 |
| Grand Total | 53 | 10 | 0 | 63 |
| Approach % | 84.13 | 15.87 | 0.00 | - |
| Intersection % | 3.39 | 0.64 | 0.00 | 4.03 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 73 | 9 | 0 | 82 | 1 | 88 | 0 | 89 |
| 78 | 7 | 0 | 85 | 0 | 65 | 0 | 65 |
| 84 | 9 | 0 | 93 | 1 | 89 | 0 | 90 |
| 93 | 10 | 0 | 103 | 1 | 66 | 0 | 67 |
| 328 | 35 | 0 | 363 | 3 | 308 | 0 | 311 |
| 106 | 6 | 0 | 112 | 0 | 80 | 0 | 80 |
| 109 | 10 | 0 | 119 | 1 | 86 | 0 | 87 |
| 125 | 8 | 0 | 133 | 2 | 110 | 0 | 112 |
| 84 | 7 | 0 | 91 | 1 | 90 | 0 | 91 |
| 424 | 31 | 0 | 455 | 4 | 366 | 0 | 370 |
| 752 | 66 | 0 | 818 | 7 | 674 | 0 | 681 |
| 91.93 | 8.07 | 0.00 | - | 1.03 | 98.97 | 0.00 | - |
| 48.14 | 4.23 | 0.00 | 52.37 | 0.45 | 43.15 | 0.00 | 43.60 |

Canton, GA
Classified Turn Movement Count

Site 17 of 23
Haley Farm Rd

E Cherokee Dr (West)
E Cherokee Dr (East)

Lat/Long
34.231786°, -84.364832°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 0700 - 0715 | 1 | 1 | 0 | 2 |
| 0715 - 0730 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 1 | 0 | 2 |
| 0800 - 0815 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 |
| Grand Total | 1 | 1 | 0 | 2 |
| Approach % | 50.00 | 50.00 | 0.00 | - |
| Intersection % | 1.49 | 1.49 | 0.00 | 2.99 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 4 | 0 | 1 | 0 | 1 |
| 2 | 0 | 0 | 2 | 0 | 1 | 0 | 1 |
| 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 11 | 1 | 0 | 12 | 0 | 2 | 0 | 2 |
| 5 | 0 | 0 | 5 | 0 | 8 | 0 | 8 |
| 6 | 0 | 0 | 6 | 0 | 16 | 0 | 16 |
| 4 | 0 | 0 | 4 | 0 | 6 | 0 | 6 |
| 5 | 0 | 0 | 5 | 0 | 1 | 0 | 1 |
| 20 | 0 | 0 | 20 | 0 | 31 | 0 | 31 |
| 31 | 1 | 0 | 32 | 0 | 33 | 0 | 33 |
| 96.88 | 3.13 | 0.00 | - | 0.00 | 100.00 | 0.00 | - |
| 46.27 | 1.49 | 0.00 | 47.76 | 0.00 | 49.25 | 0.00 | 49.25 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

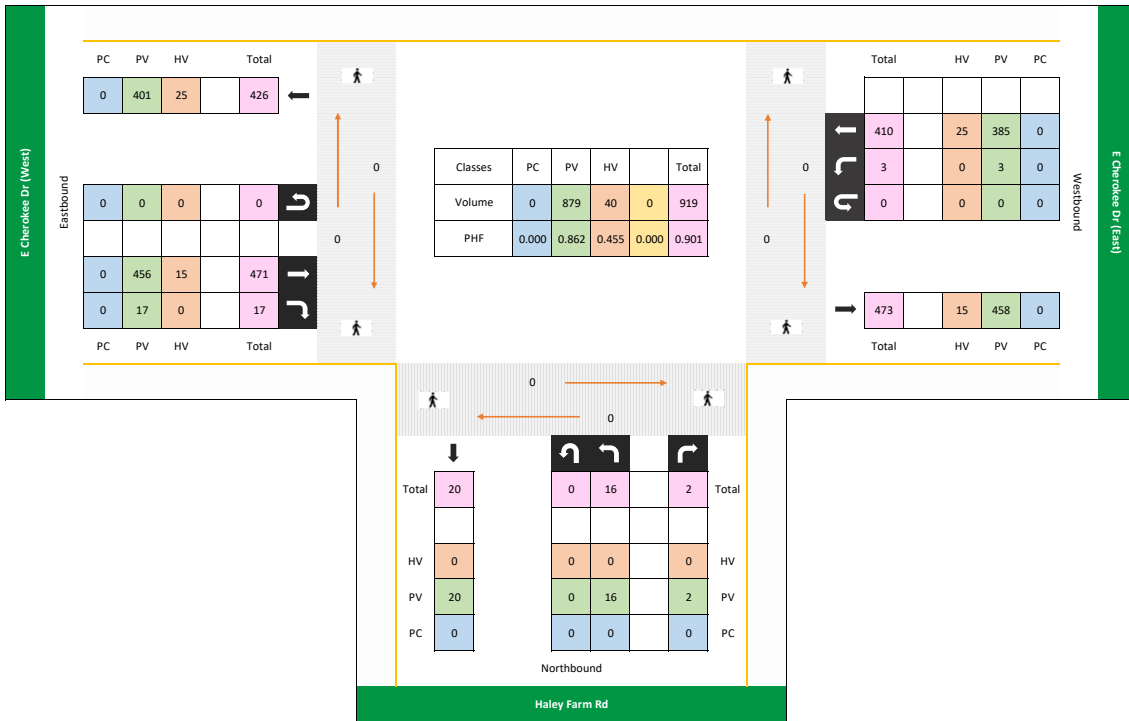
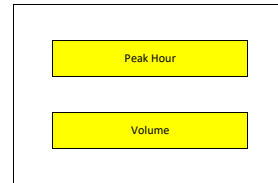
| Northbound | | | | |
|----------------|--------------|---------------|----------------|--------------|
| Haley Farm Rd | | | | |
| TIME | Left 17.1 | Right 17.2 | U-Turn 17.3 | App Total |
| 1600 - 1615 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 |
| Approach % | 0.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 0.00 | 0.00 | 0.00 |

| Eastbound | | | | Westbound | | | |
|----------------------|---------------|----------------|--------------|----------------------|--------------|----------------|--------------|
| E Cherokee Dr (West) | | | | E Cherokee Dr (East) | | | |
| Thru 17.4 | Right 17.5 | U-Turn 17.6 | App Total | Left 17.7 | Thru 17.8 | U-Turn 17.9 | App Total |
| 5 | 0 | 0 | 5 | 0 | 6 | 0 | 6 |
| 2 | 0 | 0 | 2 | 0 | 4 | 0 | 4 |
| 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 |
| 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| 8 | 0 | 0 | 8 | 0 | 19 | 0 | 19 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 8 | 1 | 0 | 9 | 0 | 20 | 0 | 20 |
| 88.89 | 11.11 | 0.00 | - | 0.00 | 100.00 | 0.00 | - |
| 27.59 | 3.45 | 0.00 | 31.03 | 0.00 | 68.97 | 0.00 | 68.97 |

Canton, GA
Peak Hour Turning Movement Count



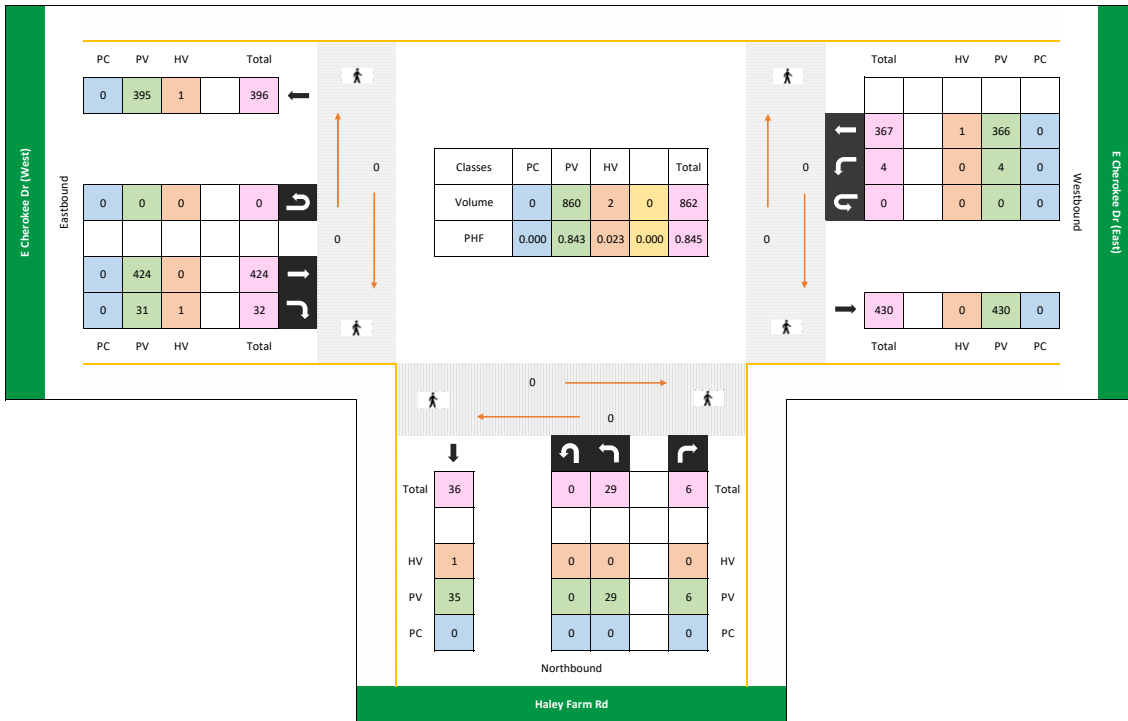
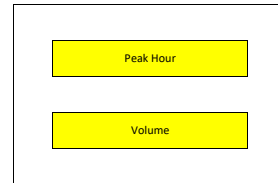
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 18 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Water Tank Rd

Lat/Long
34.246795°, -84.358057°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | U-Turn | | E Cherokee Dr (North) | | U-Turn | | Water Tank Rd | | U-Turn | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 0700 - 0715 | 0 | 127 | 1 | 128 | 82 | 1 | 0 | 83 | 0 | 3 | 0 | 3 |
| 0715 - 0730 | 0 | 93 | 0 | 93 | 94 | 0 | 0 | 94 | 0 | 9 | 0 | 9 |
| 0730 - 0745 | 0 | 99 | 0 | 99 | 170 | 1 | 0 | 171 | 0 | 14 | 0 | 14 |
| 0745 - 0800 | 0 | 105 | 1 | 106 | 126 | 1 | 0 | 127 | 3 | 19 | 0 | 22 |
| Hourly Total | 0 | 424 | 2 | 426 | 472 | 3 | 0 | 475 | 3 | 45 | 0 | 48 |
| 0800 - 0815 | 0 | 108 | 1 | 109 | 132 | 0 | 0 | 132 | 0 | 12 | 0 | 12 |
| 0815 - 0830 | 0 | 118 | 2 | 120 | 63 | 0 | 0 | 63 | 1 | 3 | 0 | 4 |
| 0830 - 0845 | 0 | 95 | 1 | 96 | 65 | 1 | 0 | 66 | 1 | 2 | 0 | 3 |
| 0845 - 0900 | 0 | 63 | 0 | 63 | 59 | 1 | 0 | 60 | 1 | 5 | 0 | 6 |
| Hourly Total | 0 | 384 | 4 | 388 | 319 | 2 | 0 | 321 | 3 | 22 | 0 | 25 |
| Grand Total | 0 | 808 | 6 | 814 | 791 | 5 | 0 | 796 | 6 | 67 | 0 | 73 |
| Approach % | 0.00 | 99.26 | 0.74 | - | 99.37 | 0.63 | 0.00 | - | 8.22 | 91.78 | 0.00 | - |
| Intersection % | 0.00 | 48.01 | 0.36 | 48.37 | 47.00 | 0.30 | 0.00 | 47.30 | 0.36 | 3.98 | 0.00 | 4.34 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | U-Turn | | E Cherokee Dr (North) | | U-Turn | | Water Tank Rd | | U-Turn | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 1600 - 1615 | 0 | 110 | 3 | 113 | 92 | 0 | 0 | 92 | 3 | 4 | 0 | 7 |
| 1615 - 1630 | 0 | 88 | 3 | 91 | 93 | 0 | 0 | 93 | 2 | 2 | 0 | 4 |
| 1630 - 1645 | 0 | 111 | 1 | 112 | 89 | 0 | 1 | 90 | 2 | 3 | 0 | 5 |
| 1645 - 1700 | 0 | 107 | 1 | 108 | 90 | 1 | 0 | 91 | 4 | 7 | 0 | 11 |
| Hourly Total | 0 | 416 | 8 | 424 | 364 | 1 | 1 | 366 | 11 | 16 | 0 | 27 |
| 1700 - 1715 | 0 | 108 | 1 | 109 | 100 | 0 | 0 | 100 | 4 | 9 | 0 | 13 |
| 1715 - 1730 | 0 | 133 | 2 | 135 | 100 | 2 | 0 | 102 | 5 | 12 | 0 | 17 |
| 1730 - 1745 | 0 | 166 | 2 | 168 | 102 | 2 | 0 | 104 | 0 | 15 | 0 | 15 |
| 1745 - 1800 | 0 | 151 | 3 | 154 | 110 | 4 | 0 | 114 | 5 | 12 | 0 | 17 |
| Hourly Total | 0 | 558 | 8 | 566 | 412 | 8 | 0 | 420 | 14 | 48 | 0 | 62 |
| Grand Total | 0 | 974 | 16 | 990 | 776 | 9 | 1 | 786 | 25 | 64 | 0 | 89 |
| Approach % | 0.00 | 98.38 | 1.62 | - | 98.73 | 1.15 | 0.13 | - | 28.09 | 71.91 | 0.00 | - |
| Intersection % | 0.00 | 52.23 | 0.86 | 53.08 | 41.61 | 0.48 | 0.05 | 42.14 | 1.34 | 3.43 | 0.00 | 4.77 |

Canton, GA
Classified Turn Movement Count

Site 18 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Water Tank Rd

Lat/Long
34.246795°, -84.358057°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | U-Turn | | E Cherokee Dr (North) | | U-Turn | | Water Tank Rd | | U-Turn | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 0700 - 0715 | 0 | 126 | 1 | 127 | 81 | 1 | 0 | 82 | 0 | 3 | 0 | 3 |
| 0715 - 0730 | 0 | 89 | 0 | 89 | 91 | 0 | 0 | 91 | 0 | 9 | 0 | 9 |
| 0730 - 0745 | 0 | 96 | 0 | 96 | 169 | 1 | 0 | 170 | 0 | 14 | 0 | 14 |
| 0745 - 0800 | 0 | 101 | 1 | 102 | 125 | 1 | 0 | 126 | 1 | 19 | 0 | 20 |
| Hourly Total | 0 | 412 | 2 | 414 | 466 | 3 | 0 | 469 | 1 | 45 | 0 | 46 |
| 0800 - 0815 | 0 | 103 | 1 | 104 | 119 | 0 | 0 | 119 | 0 | 11 | 0 | 11 |
| 0815 - 0830 | 0 | 105 | 2 | 107 | 58 | 0 | 0 | 58 | 1 | 3 | 0 | 4 |
| 0830 - 0845 | 0 | 93 | 1 | 94 | 58 | 1 | 0 | 59 | 1 | 2 | 0 | 3 |
| 0845 - 0900 | 0 | 61 | 0 | 61 | 56 | 1 | 0 | 57 | 1 | 5 | 0 | 6 |
| Hourly Total | 0 | 362 | 4 | 366 | 291 | 2 | 0 | 293 | 3 | 21 | 0 | 24 |
| Grand Total | 0 | 774 | 6 | 780 | 757 | 5 | 0 | 762 | 4 | 66 | 0 | 70 |
| Approach % | 0.00 | 99.23 | 0.77 | - | 99.34 | 0.66 | 0.00 | - | 5.71 | 94.29 | 0.00 | - |
| Intersection % | 0.00 | 48.01 | 0.37 | 48.39 | 46.96 | 0.31 | 0.00 | 47.27 | 0.25 | 4.09 | 0.00 | 4.34 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | U-Turn | | E Cherokee Dr (North) | | U-Turn | | Water Tank Rd | | U-Turn | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 1600 - 1615 | 0 | 107 | 3 | 110 | 87 | 0 | 0 | 87 | 2 | 4 | 0 | 6 |
| 1615 - 1630 | 0 | 86 | 3 | 89 | 87 | 0 | 0 | 87 | 1 | 2 | 0 | 3 |
| 1630 - 1645 | 0 | 109 | 1 | 110 | 86 | 0 | 1 | 87 | 1 | 3 | 0 | 4 |
| 1645 - 1700 | 0 | 104 | 1 | 105 | 84 | 1 | 0 | 85 | 2 | 7 | 0 | 9 |
| Hourly Total | 0 | 406 | 8 | 414 | 344 | 1 | 1 | 346 | 6 | 16 | 0 | 22 |
| 1700 - 1715 | 0 | 107 | 1 | 108 | 98 | 0 | 0 | 98 | 3 | 9 | 0 | 12 |
| 1715 - 1730 | 0 | 132 | 2 | 134 | 100 | 2 | 0 | 102 | 3 | 12 | 0 | 15 |
| 1730 - 1745 | 0 | 166 | 2 | 168 | 102 | 2 | 0 | 104 | 0 | 15 | 0 | 15 |
| 1745 - 1800 | 0 | 150 | 3 | 153 | 109 | 4 | 0 | 113 | 2 | 12 | 0 | 14 |
| Hourly Total | 0 | 555 | 8 | 563 | 409 | 8 | 0 | 417 | 8 | 48 | 0 | 56 |
| Grand Total | 0 | 961 | 16 | 977 | 753 | 9 | 1 | 763 | 14 | 64 | 0 | 78 |
| Approach % | 0.00 | 98.36 | 1.64 | - | 98.69 | 1.18 | 0.13 | - | 17.95 | 82.05 | 0.00 | - |
| Intersection % | 0.00 | 52.86 | 0.88 | 53.74 | 41.42 | 0.50 | 0.06 | 41.97 | 0.77 | 3.52 | 0.00 | 4.29 |

Canton, GA
Classified Turn Movement Count

Site 18 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Water Tank Rd

Lat/Long
34.246795°, -84.358057°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | | | E Cherokee Dr (North) | | | | Water Tank Rd | | | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 0700 - 0715 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 |
| Hourly Total | 0 | 12 | 0 | 12 | 6 | 0 | 0 | 6 | 2 | 0 | 0 | 2 |
| 0800 - 0815 | 0 | 5 | 0 | 5 | 13 | 0 | 0 | 13 | 0 | 1 | 0 | 1 |
| 0815 - 0830 | 0 | 13 | 0 | 13 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 2 | 0 | 2 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 |
| 0845 - 0900 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 22 | 0 | 22 | 28 | 0 | 0 | 28 | 0 | 1 | 0 | 1 |
| Grand Total | 0 | 34 | 0 | 34 | 34 | 0 | 0 | 34 | 2 | 1 | 0 | 3 |
| Approach % | 0.00 | 100.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | - | 66.67 | 33.33 | 0.00 | - |
| Intersection % | 0.00 | 47.89 | 0.00 | 47.89 | 47.89 | 0.00 | 0.00 | 47.89 | 2.82 | 1.41 | 0.00 | 4.23 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

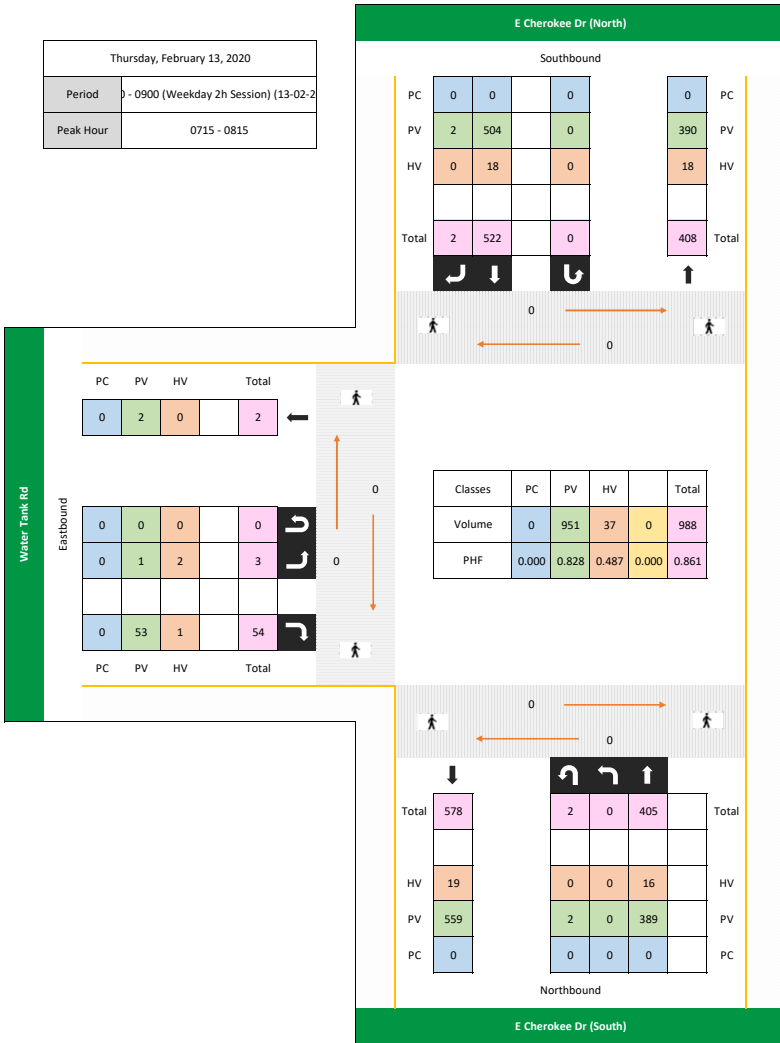
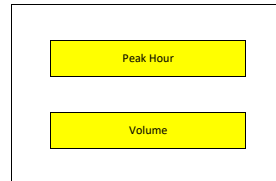
| TIME | Northbound | | | | Southbound | | | | Eastbound | | | |
|----------------|-----------------------|--------------|----------------|--------------|-----------------------|---------------|----------------|--------------|---------------|---------------|----------------|--------------|
| | E Cherokee Dr (South) | | | | E Cherokee Dr (North) | | | | Water Tank Rd | | | |
| | Left 18.1 | Thru 18.2 | U-Turn 18.3 | App Total | Thru 18.4 | Right 18.5 | U-Turn 18.6 | App Total | Left 18.7 | Right 18.8 | U-Turn 18.9 | App Total |
| 1600 - 1615 | 0 | 3 | 0 | 3 | 5 | 0 | 0 | 5 | 1 | 0 | 0 | 1 |
| 1615 - 1630 | 0 | 2 | 0 | 2 | 6 | 0 | 0 | 6 | 1 | 0 | 0 | 1 |
| 1630 - 1645 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| 1645 - 1700 | 0 | 3 | 0 | 3 | 6 | 0 | 0 | 6 | 2 | 0 | 0 | 2 |
| Hourly Total | 0 | 10 | 0 | 10 | 20 | 0 | 0 | 20 | 5 | 0 | 0 | 5 |
| 1700 - 1715 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| 1715 - 1730 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 3 |
| Hourly Total | 0 | 3 | 0 | 3 | 3 | 0 | 0 | 3 | 6 | 0 | 0 | 6 |
| Grand Total | 0 | 13 | 0 | 13 | 23 | 0 | 0 | 23 | 11 | 0 | 0 | 11 |
| Approach % | 0.00 | 100.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | - | 100.00 | 0.00 | 0.00 | - |
| Intersection % | 0.00 | 27.66 | 0.00 | 27.66 | 48.94 | 0.00 | 0.00 | 48.94 | 23.40 | 0.00 | 0.00 | 23.40 |

Canton, GA

Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|--------------------------------------|
| Period | > 0900 (Weekday 2h Session) (13-02-2 |
| Peak Hour | 0715 - 0815 |

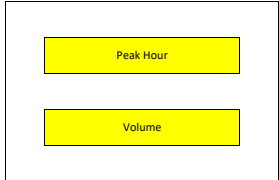


Canton, GA

Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Water Tank Rd

Canton, GA
Classified Turn Movement Count

Site 19 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Local Access (West)
Local Access (East)

Lat/Long
34.249041°, -84.358880°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
All vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Local Access (West) | | | | | Westbound Local Access (East) | | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|---|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | |
| | 19.1 | 19.2 | 19.3 | 19.4 | | 19.5 | 19.6 | 19.7 | 19.8 | | 19.9 | 19.10 | 19.11 | 19.12 | | 19.13 | 19.14 | 19.15 | 19.16 | | |
| 0600 - 0615 | 0 | 22 | 0 | 0 | 22 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0615 - 0630 | 0 | 31 | 2 | 0 | 33 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0630 - 0645 | 0 | 47 | 1 | 0 | 48 | 4 | 27 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0645 - 0700 | 0 | 40 | 13 | 0 | 53 | 18 | 53 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 8 | |
| Hourly Total | 0 | 140 | 16 | 0 | 156 | 22 | 133 | 0 | 0 | 155 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 8 | |
| 0700 - 0715 | 0 | 46 | 76 | 0 | 122 | 43 | 60 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 30 | 1 | 54 | |
| 0715 - 0730 | 0 | 20 | 60 | 0 | 80 | 49 | 34 | 0 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 42 | 2 | 110 | |
| 0730 - 0745 | 0 | 81 | 46 | 0 | 127 | 21 | 112 | 0 | 0 | 133 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 43 | 0 | 101 | |
| 0745 - 0800 | 0 | 107 | 1 | 0 | 108 | 2 | 128 | 0 | 0 | 130 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | |
| Hourly Total | 0 | 254 | 183 | 0 | 437 | 115 | 334 | 0 | 0 | 449 | 0 | 0 | 0 | 0 | 0 | 148 | 0 | 117 | 3 | 268 | |
| 0800 - 0815 | 0 | 104 | 5 | 0 | 109 | 2 | 131 | 0 | 0 | 133 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | |
| 0815 - 0830 | 0 | 116 | 3 | 0 | 119 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | |
| 0830 - 0845 | 0 | 93 | 4 | 0 | 97 | 2 | 61 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | |
| 0845 - 0900 | 0 | 63 | 2 | 0 | 65 | 1 | 55 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 4 | |
| Hourly Total | 0 | 376 | 14 | 0 | 390 | 5 | 307 | 0 | 0 | 312 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 14 | |
| Grand Total | 0 | 770 | 213 | 0 | 983 | 142 | 774 | 0 | 0 | 916 | 0 | 0 | 0 | 0 | 0 | 157 | 0 | 128 | 5 | 290 | |
| Approach % | 0.00 | 78.33 | 21.67 | 0.00 | - | 15.50 | 84.50 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 54.14 | 0.00 | 44.14 | 1.72 | - | |
| Intersection % | 0.00 | 35.18 | 9.73 | 0.00 | 44.91 | 6.49 | 35.36 | 0.00 | 0.00 | 41.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.17 | 0.00 | 5.85 | 0.23 | 13.25 | |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
All vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Local Access (West) | | | | | Westbound Local Access (East) | | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|--|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | |
| | 19.1 | 19.2 | 19.3 | 19.4 | | 19.5 | 19.6 | 19.7 | 19.8 | | 19.9 | 19.10 | 19.11 | 19.12 | | 19.13 | 19.14 | 19.15 | 19.16 | | |
| 1400 - 1415 | 0 | 57 | 10 | 0 | 67 | 9 | 65 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | |
| 1415 - 1430 | 0 | 73 | 8 | 0 | 81 | 11 | 57 | 0 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | |
| 1430 - 1445 | 0 | 77 | 21 | 0 | 98 | 12 | 76 | 0 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 45 | 0 | 81 | |
| 1445 - 1500 | 0 | 68 | 2 | 0 | 70 | 3 | 83 | 0 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 9 | 0 | 17 | |
| Hourly Total | 0 | 275 | 41 | 0 | 316 | 35 | 281 | 0 | 0 | 316 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 56 | 0 | 104 | |
| 1500 - 1515 | 0 | 67 | 3 | 0 | 70 | 1 | 93 | 0 | 0 | 94 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 5 | |
| 1515 - 1530 | 0 | 103 | 1 | 0 | 104 | 1 | 70 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | |
| 1530 - 1545 | 0 | 148 | 4 | 0 | 152 | 3 | 86 | 0 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 8 | |
| 1545 - 1600 | 0 | 176 | 5 | 0 | 181 | 4 | 81 | 0 | 0 | 85 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 9 | |
| Hourly Total | 0 | 494 | 13 | 0 | 507 | 9 | 330 | 0 | 0 | 339 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 16 | 0 | 28 | |
| 1600 - 1615 | 0 | 103 | 8 | 0 | 111 | 3 | 90 | 0 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 12 | |
| 1615 - 1630 | 0 | 88 | 1 | 0 | 89 | 5 | 89 | 0 | 0 | 94 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 5 | 0 | 12 | |
| 1630 - 1645 | 0 | 112 | 5 | 0 | 117 | 1 | 92 | 0 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 0 | 8 | |
| 1645 - 1700 | 0 | 102 | 9 | 0 | 111 | 4 | 81 | 0 | 0 | 85 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 0 | 10 | |
| Hourly Total | 0 | 405 | 23 | 0 | 428 | 13 | 352 | 0 | 0 | 365 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 29 | 0 | 42 | |
| 1700 - 1715 | 0 | 99 | 8 | 0 | 107 | 5 | 94 | 0 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 11 | 0 | 15 | |
| 1715 - 1730 | 0 | 135 | 7 | 0 | 142 | 2 | 94 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 11 | 0 | 19 | |
| 1730 - 1745 | 0 | 146 | 14 | 0 | 160 | 13 | 101 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 9 | |
| 1745 - 1800 | 0 | 143 | 11 | 0 | 154 | 5 | 112 | 0 | 0 | 117 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 9 | 0 | 11 | |
| Hourly Total | 0 | 523 | 40 | 0 | 563 | 25 | 401 | 0 | 0 | 426 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 37 | 0 | 54 | |
| Grand Total | 0 | 1697 | 117 | 0 | 1814 | 82 | 1364 | 0 | 0 | 1446 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 138 | 0 | 228 | |
| Approach % | 0.00 | 93.55 | 6.45 | 0.00 | - | 5.67 | 94.33 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 39.47 | 0.00 | 60.53 | 0.00 | - | |
| Intersection % | 0.00 | 48.65 | 3.35 | 0.00 | 52.01 | 2.35 | 39.11 | 0.00 | 0.00 | 41.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.58 | 0.00 | 3.96 | 0.00 | 6.54 | |

Canton, GA
Classified Turn Movement Count

Site 19 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
Local Access (West)
Local Access (East)

Lat/Long
34.249041°, -84.358880°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0600 - 0900 (Weekday 3h Session) (13-02-2020)
Passenger Vehicles

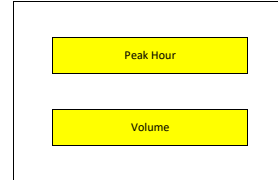
| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Local Access (West) | | | | | Westbound Local Access (East) | | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|-------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | |
| | 19.1 | 19.2 | 19.3 | 19.4 | | 19.5 | 19.6 | 19.7 | 19.8 | | 19.9 | 19.10 | 19.11 | 19.12 | | 19.13 | 19.14 | 19.15 | 19.16 | | |
| 0600 - 0615 | 0 | 22 | 0 | 0 | 22 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0615 - 0630 | 0 | 30 | 2 | 0 | 32 | 0 | 30 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0630 - 0645 | 0 | 47 | 1 | 0 | 48 | 4 | 26 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0645 - 0700 | 0 | 38 | 13 | 0 | 51 | 18 | 51 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 8 | 8 |
| Hourly Total | 0 | 137 | 16 | 0 | 153 | 22 | 126 | 0 | 0 | 148 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 8 | 8 |
| 0700 - 0715 | 0 | 45 | 76 | 0 | 121 | 43 | 56 | 0 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 30 | 1 | 54 | 54 |
| 0715 - 0730 | 0 | 15 | 60 | 0 | 75 | 49 | 33 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 42 | 2 | 110 | 110 |
| 0730 - 0745 | 0 | 77 | 46 | 0 | 123 | 21 | 111 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 43 | 0 | 101 | 101 |
| 0745 - 0800 | 0 | 103 | 1 | 0 | 104 | 2 | 128 | 0 | 0 | 130 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 3 |
| Hourly Total | 0 | 240 | 183 | 0 | 423 | 115 | 328 | 0 | 0 | 443 | 0 | 0 | 0 | 0 | 0 | 148 | 0 | 117 | 3 | 268 | 268 |
| 0800 - 0815 | 0 | 99 | 5 | 0 | 104 | 2 | 119 | 0 | 0 | 121 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 |
| 0815 - 0830 | 0 | 103 | 3 | 0 | 106 | 0 | 54 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 4 |
| 0830 - 0845 | 0 | 91 | 4 | 0 | 95 | 2 | 54 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 4 |
| 0845 - 0900 | 0 | 61 | 2 | 0 | 63 | 1 | 52 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 4 | 4 |
| Hourly Total | 0 | 354 | 14 | 0 | 368 | 5 | 279 | 0 | 0 | 284 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 14 | 14 |
| Grand Total | 0 | 731 | 213 | 0 | 944 | 142 | 733 | 0 | 0 | 875 | 0 | 0 | 0 | 0 | 0 | 157 | 0 | 128 | 5 | 290 | 290 |
| Approach % | 0.00 | 77.44 | 22.56 | 0.00 | - | 16.23 | 83.77 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 54.14 | 0.00 | 44.14 | 1.72 | - | - |
| Intersection % | 0.00 | 34.66 | 10.10 | 0.00 | 44.76 | 6.73 | 34.76 | 0.00 | 0.00 | 41.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.44 | 0.00 | 6.07 | 0.24 | 13.75 | 13.75 |

1400 - 1800 (Weekday 4h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound E Cherokee Dr (South) | | | | | Southbound E Cherokee Dr (North) | | | | | Eastbound Local Access (West) | | | | | Westbound Local Access (East) | | | | | |
|----------------|-------------------------------------|-------|-------|--------|-----------|-------------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|----------------------------------|-------|-------|--------|-----------|------|
| | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | Left | Thru | Right | U-Turn | App Total | |
| | 19.1 | 19.2 | 19.3 | 19.4 | | 19.5 | 19.6 | 19.7 | 19.8 | | 19.9 | 19.10 | 19.11 | 19.12 | | 19.13 | 19.14 | 19.15 | 19.16 | | |
| 1400 - 1415 | 0 | 51 | 10 | 0 | 61 | 9 | 64 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 3 |
| 1415 - 1430 | 0 | 70 | 8 | 0 | 78 | 11 | 52 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 3 |
| 1430 - 1445 | 0 | 75 | 21 | 0 | 96 | 12 | 62 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 45 | 0 | 81 | 81 |
| 1445 - 1500 | 0 | 64 | 2 | 0 | 66 | 3 | 77 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 9 | 0 | 17 | 17 |
| Hourly Total | 0 | 260 | 41 | 0 | 301 | 35 | 255 | 0 | 0 | 290 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 56 | 0 | 104 | 104 |
| 1500 - 1515 | 0 | 62 | 3 | 0 | 65 | 1 | 73 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 5 | 5 |
| 1515 - 1530 | 0 | 97 | 1 | 0 | 98 | 1 | 70 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 6 |
| 1530 - 1545 | 0 | 144 | 4 | 0 | 148 | 3 | 84 | 0 | 0 | 87 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 8 | 8 |
| 1545 - 1600 | 0 | 156 | 5 | 0 | 161 | 4 | 77 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 9 | 9 |
| Hourly Total | 0 | 459 | 13 | 0 | 472 | 9 | 304 | 0 | 0 | 313 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 16 | 0 | 28 | 28 |
| 1600 - 1615 | 0 | 99 | 6 | 0 | 105 | 3 | 86 | 0 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 12 | 12 |
| 1615 - 1630 | 0 | 86 | 1 | 0 | 87 | 5 | 85 | 0 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 5 | 0 | 12 | 12 |
| 1630 - 1645 | 0 | 109 | 5 | 0 | 114 | 1 | 85 | 0 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 0 | 8 | 8 |
| 1645 - 1700 | 0 | 101 | 6 | 0 | 107 | 4 | 76 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 0 | 10 | 10 |
| Hourly Total | 0 | 395 | 18 | 0 | 413 | 13 | 332 | 0 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 29 | 0 | 42 | 42 |
| 1700 - 1715 | 0 | 98 | 7 | 0 | 105 | 5 | 93 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 11 | 0 | 15 | 15 |
| 1715 - 1730 | 0 | 135 | 6 | 0 | 141 | 2 | 94 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 11 | 0 | 19 | 19 |
| 1730 - 1745 | 0 | 146 | 12 | 0 | 158 | 13 | 100 | 0 | 0 | 113 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 9 | 9 |
| 1745 - 1800 | 0 | 141 | 9 | 0 | 150 | 5 | 111 | 0 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 9 | 0 | 11 | 11 |
| Hourly Total | 0 | 520 | 34 | 0 | 554 | 25 | 398 | 0 | 0 | 423 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 37 | 0 | 54 | 54 |
| Grand Total | 0 | 1634 | 106 | 0 | 1740 | 82 | 1289 | 0 | 0 | 1371 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 138 | 0 | 228 | 228 |
| Approach % | 0.00 | 93.91 | 6.09 | 0.00 | - | 5.98 | 94.02 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 39.47 | 0.00 | 60.53 | 0.00 | - | - |
| Intersection % | 0.00 | 48.94 | 3.17 | 0.00 | 52.11 | 2.46 | 38.60 | 0.00 | 0.00 | 41.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.70 | 0.00 | 4.13 | 0.00 | 6.83 | 6.83 |



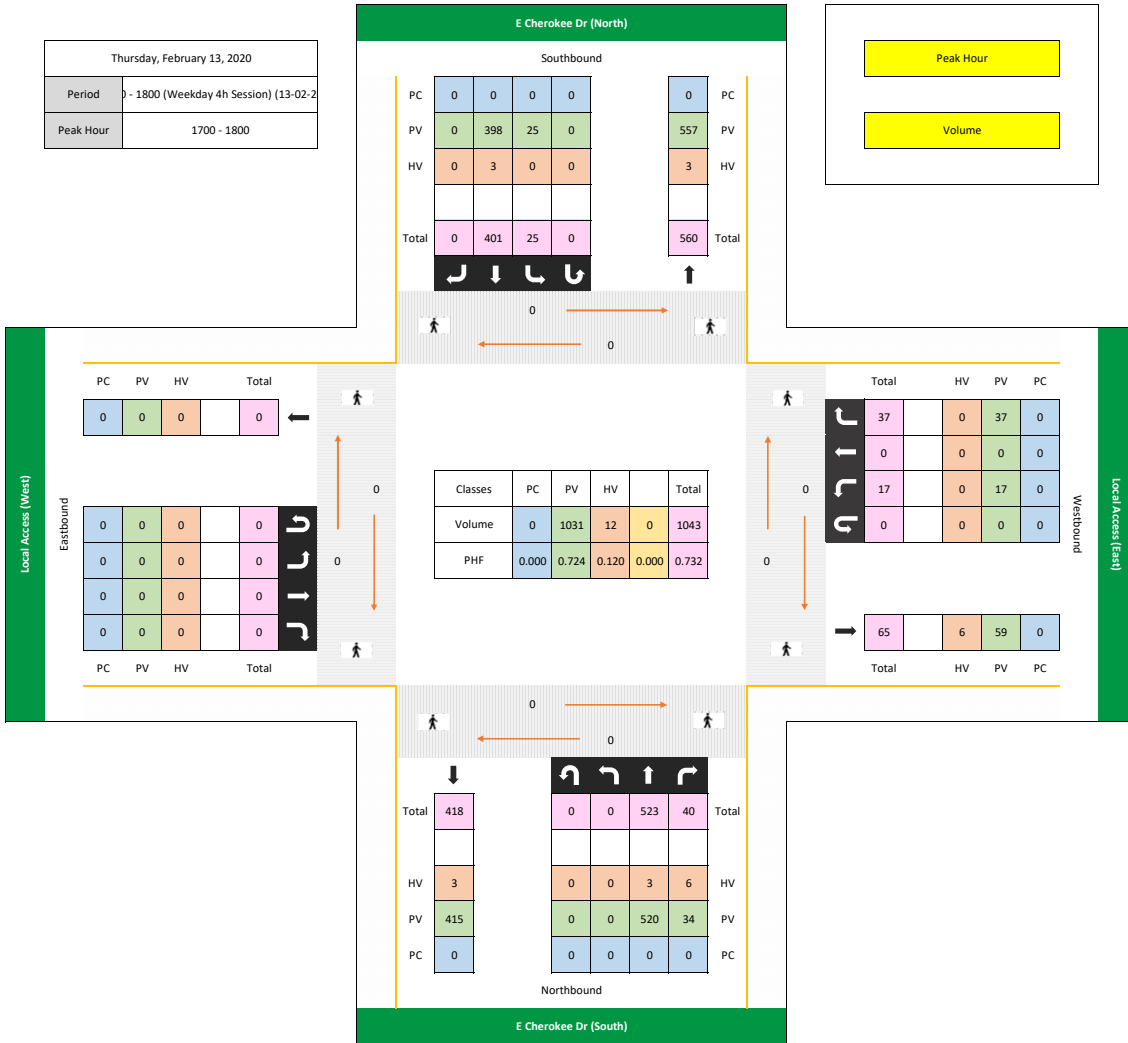
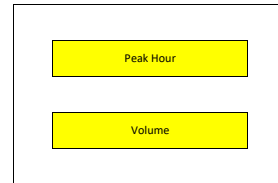
| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 0900 (Weekday 3h Session) (13-02-2) |
| Peak Hour | 0700 - 0800 |



Canton, GA
Peak Hour Turning Movement Count



| | |
|-----------------------------|---------------------------------------|
| Thursday, February 13, 2020 | |
| Period | > 1800 (Weekday 4h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



Canton, GA
Classified Turn Movement Count

Site 20 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
GA-20 Cumming Hwy (West)
GA-20 Cumming Hwy (East)

Lat/Long
34.253797°, -84.360451°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 0700 - 0715 | 10 | 19 | 29 | 0 | 58 | 32 | 38 | 7 | 0 | 77 | 2 | 134 | 19 | 0 | 155 | 40 | 87 | 10 | 0 | 137 |
| 0715 - 0730 | 14 | 17 | 28 | 0 | 59 | 20 | 47 | 4 | 0 | 71 | 3 | 110 | 17 | 0 | 130 | 42 | 126 | 16 | 0 | 184 |
| 0730 - 0745 | 27 | 26 | 45 | 0 | 98 | 29 | 46 | 9 | 0 | 84 | 6 | 120 | 30 | 0 | 156 | 23 | 124 | 22 | 0 | 169 |
| 0745 - 0800 | 30 | 37 | 32 | 0 | 99 | 18 | 58 | 11 | 0 | 87 | 6 | 101 | 30 | 0 | 137 | 23 | 128 | 18 | 0 | 169 |
| Hourly Total | 81 | 99 | 134 | 0 | 314 | 99 | 189 | 31 | 0 | 319 | 17 | 465 | 96 | 0 | 578 | 128 | 465 | 66 | 0 | 659 |
| 0800 - 0815 | 36 | 38 | 19 | 0 | 93 | 31 | 49 | 10 | 0 | 90 | 3 | 130 | 39 | 0 | 172 | 19 | 136 | 16 | 0 | 171 |
| 0815 - 0830 | 48 | 33 | 28 | 0 | 109 | 20 | 25 | 10 | 0 | 55 | 9 | 129 | 20 | 0 | 158 | 14 | 103 | 12 | 0 | 129 |
| 0830 - 0845 | 45 | 32 | 22 | 0 | 99 | 24 | 25 | 11 | 0 | 60 | 8 | 123 | 14 | 0 | 145 | 18 | 161 | 11 | 0 | 190 |
| 0845 - 0900 | 28 | 22 | 14 | 0 | 64 | 22 | 19 | 12 | 0 | 53 | 7 | 127 | 12 | 0 | 146 | 15 | 136 | 20 | 0 | 171 |
| Hourly Total | 157 | 125 | 83 | 0 | 365 | 97 | 118 | 43 | 0 | 258 | 27 | 509 | 85 | 0 | 621 | 66 | 536 | 59 | 0 | 661 |
| Grand Total | 238 | 224 | 217 | 0 | 679 | 196 | 307 | 74 | 0 | 577 | 44 | 974 | 181 | 0 | 1199 | 194 | 1001 | 125 | 0 | 1320 |
| Approach % | 35.05 | 32.99 | 31.96 | 0.00 | - | 33.97 | 53.21 | 12.82 | 0.00 | - | 3.67 | 81.23 | 15.10 | 0.00 | - | 14.70 | 75.83 | 9.47 | 0.00 | - |
| Intersection % | 6.30 | 5.93 | 5.75 | 0.00 | 17.99 | 5.19 | 8.13 | 1.96 | 0.00 | 15.28 | 1.17 | 25.80 | 4.79 | 0.00 | 31.76 | 5.14 | 26.52 | 3.31 | 0.00 | 34.97 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 1600 - 1615 | 38 | 44 | 19 | 0 | 101 | 18 | 15 | 11 | 0 | 44 | 12 | 170 | 30 | 0 | 212 | 24 | 137 | 20 | 0 | 181 |
| 1615 - 1630 | 30 | 44 | 27 | 0 | 101 | 26 | 29 | 10 | 0 | 65 | 10 | 162 | 26 | 0 | 198 | 24 | 127 | 27 | 0 | 178 |
| 1630 - 1645 | 25 | 35 | 21 | 0 | 81 | 21 | 24 | 10 | 0 | 55 | 11 | 160 | 25 | 0 | 196 | 26 | 151 | 25 | 0 | 202 |
| 1645 - 1700 | 22 | 41 | 38 | 0 | 101 | 35 | 29 | 16 | 0 | 80 | 14 | 140 | 17 | 0 | 171 | 25 | 123 | 24 | 0 | 172 |
| Hourly Total | 115 | 164 | 105 | 0 | 384 | 100 | 97 | 47 | 0 | 244 | 47 | 632 | 98 | 0 | 777 | 99 | 538 | 96 | 0 | 733 |
| 1700 - 1715 | 27 | 41 | 30 | 0 | 98 | 29 | 32 | 17 | 0 | 78 | 13 | 161 | 26 | 0 | 200 | 27 | 140 | 22 | 0 | 189 |
| 1715 - 1730 | 37 | 46 | 37 | 0 | 120 | 48 | 48 | 12 | 0 | 108 | 15 | 146 | 20 | 0 | 181 | 21 | 151 | 22 | 0 | 194 |
| 1730 - 1745 | 40 | 47 | 30 | 0 | 117 | 34 | 42 | 14 | 0 | 90 | 8 | 151 | 30 | 0 | 189 | 35 | 161 | 25 | 0 | 221 |
| 1745 - 1800 | 49 | 48 | 42 | 0 | 139 | 32 | 36 | 14 | 0 | 82 | 8 | 151 | 32 | 0 | 191 | 34 | 138 | 27 | 0 | 199 |
| Hourly Total | 153 | 182 | 139 | 0 | 474 | 143 | 158 | 57 | 0 | 358 | 44 | 609 | 108 | 0 | 761 | 117 | 590 | 96 | 0 | 803 |
| Grand Total | 268 | 346 | 244 | 0 | 858 | 243 | 255 | 104 | 0 | 602 | 91 | 1241 | 206 | 0 | 1538 | 216 | 1128 | 192 | 0 | 1536 |
| Approach % | 31.24 | 40.33 | 28.44 | 0.00 | - | 40.37 | 42.36 | 17.28 | 0.00 | - | 5.92 | 80.69 | 13.39 | 0.00 | - | 14.06 | 73.44 | 12.50 | 0.00 | - |
| Intersection % | 5.91 | 7.63 | 5.38 | 0.00 | 18.92 | 5.36 | 5.62 | 2.29 | 0.00 | 13.28 | 2.01 | 27.37 | 4.54 | 0.00 | 33.92 | 4.76 | 24.88 | 4.23 | 0.00 | 33.88 |

Canton, GA
Classified Turn Movement Count

Site 20 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
GA-20 Cumming Hwy (West)
GA-20 Cumming Hwy (East)

Lat/Long
34.253797°, -84.360451°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 0700 - 0715 | 8 | 19 | 25 | 0 | 52 | 32 | 38 | 7 | 0 | 77 | 2 | 123 | 19 | 0 | 144 | 40 | 78 | 9 | 0 | 127 |
| 0715 - 0730 | 14 | 17 | 27 | 0 | 58 | 20 | 47 | 4 | 0 | 71 | 3 | 100 | 17 | 0 | 120 | 42 | 116 | 15 | 0 | 173 |
| 0730 - 0745 | 25 | 25 | 45 | 0 | 95 | 29 | 46 | 9 | 0 | 84 | 6 | 104 | 29 | 0 | 139 | 23 | 113 | 21 | 0 | 157 |
| 0745 - 0800 | 30 | 34 | 32 | 0 | 96 | 17 | 58 | 11 | 0 | 86 | 5 | 92 | 27 | 0 | 124 | 22 | 112 | 18 | 0 | 152 |
| Hourly Total | 77 | 95 | 129 | 0 | 301 | 98 | 189 | 31 | 0 | 318 | 16 | 419 | 92 | 0 | 527 | 127 | 419 | 63 | 0 | 609 |
| 0800 - 0815 | 35 | 34 | 18 | 0 | 87 | 30 | 42 | 9 | 0 | 81 | 3 | 121 | 36 | 0 | 160 | 16 | 119 | 14 | 0 | 149 |
| 0815 - 0830 | 45 | 27 | 26 | 0 | 98 | 20 | 20 | 10 | 0 | 50 | 9 | 115 | 19 | 0 | 143 | 12 | 94 | 11 | 0 | 117 |
| 0830 - 0845 | 44 | 30 | 21 | 0 | 95 | 24 | 24 | 10 | 0 | 58 | 7 | 104 | 12 | 0 | 123 | 17 | 148 | 10 | 0 | 175 |
| 0845 - 0900 | 28 | 22 | 13 | 0 | 63 | 22 | 19 | 11 | 0 | 52 | 7 | 118 | 11 | 0 | 136 | 14 | 123 | 16 | 0 | 153 |
| Hourly Total | 152 | 113 | 78 | 0 | 343 | 96 | 105 | 40 | 0 | 241 | 26 | 458 | 78 | 0 | 562 | 59 | 484 | 51 | 0 | 594 |
| Grand Total | 229 | 208 | 207 | 0 | 644 | 194 | 294 | 71 | 0 | 559 | 42 | 877 | 170 | 0 | 1089 | 186 | 903 | 114 | 0 | 1203 |
| Approach % | 35.56 | 32.30 | 32.14 | 0.00 | - | 34.70 | 52.59 | 12.70 | 0.00 | - | 3.86 | 80.53 | 15.61 | 0.00 | - | 15.46 | 75.06 | 9.48 | 0.00 | - |
| Intersection % | 6.55 | 5.95 | 5.92 | 0.00 | 18.43 | 5.55 | 8.41 | 2.03 | 0.00 | 15.99 | 1.20 | 25.09 | 4.86 | 0.00 | 31.16 | 5.32 | 25.84 | 3.26 | 0.00 | 34.42 |

1600 - 1800 (Weekday 2h Session) (13-02-2020)
Passenger Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 1600 - 1615 | 38 | 44 | 17 | 0 | 99 | 18 | 14 | 11 | 0 | 43 | 12 | 158 | 29 | 0 | 199 | 22 | 128 | 20 | 0 | 170 |
| 1615 - 1630 | 29 | 44 | 27 | 0 | 100 | 25 | 27 | 9 | 0 | 61 | 9 | 155 | 26 | 0 | 190 | 20 | 116 | 26 | 0 | 162 |
| 1630 - 1645 | 22 | 35 | 20 | 0 | 77 | 20 | 22 | 10 | 0 | 52 | 11 | 150 | 23 | 0 | 184 | 25 | 138 | 25 | 0 | 188 |
| 1645 - 1700 | 21 | 41 | 37 | 0 | 99 | 35 | 28 | 15 | 0 | 78 | 14 | 131 | 14 | 0 | 159 | 25 | 117 | 23 | 0 | 165 |
| Hourly Total | 110 | 164 | 101 | 0 | 375 | 98 | 91 | 45 | 0 | 234 | 46 | 594 | 92 | 0 | 732 | 92 | 499 | 94 | 0 | 685 |
| 1700 - 1715 | 27 | 41 | 30 | 0 | 98 | 29 | 32 | 15 | 0 | 76 | 13 | 150 | 26 | 0 | 189 | 27 | 131 | 22 | 0 | 180 |
| 1715 - 1730 | 37 | 46 | 37 | 0 | 120 | 48 | 48 | 12 | 0 | 108 | 13 | 139 | 20 | 0 | 172 | 21 | 141 | 21 | 0 | 183 |
| 1730 - 1745 | 40 | 47 | 30 | 0 | 117 | 33 | 42 | 14 | 0 | 89 | 8 | 141 | 30 | 0 | 179 | 34 | 148 | 25 | 0 | 207 |
| 1745 - 1800 | 48 | 48 | 42 | 0 | 138 | 32 | 36 | 14 | 0 | 82 | 8 | 146 | 32 | 0 | 186 | 33 | 131 | 25 | 0 | 189 |
| Hourly Total | 152 | 182 | 139 | 0 | 473 | 142 | 158 | 55 | 0 | 355 | 42 | 576 | 108 | 0 | 726 | 115 | 551 | 93 | 0 | 759 |
| Grand Total | 262 | 346 | 240 | 0 | 848 | 240 | 249 | 100 | 0 | 589 | 88 | 1170 | 200 | 0 | 1458 | 207 | 1050 | 187 | 0 | 1444 |
| Approach % | 30.90 | 40.80 | 28.30 | 0.00 | - | 40.75 | 42.28 | 16.98 | 0.00 | - | 6.04 | 80.25 | 13.72 | 0.00 | - | 14.34 | 72.71 | 12.95 | 0.00 | - |
| Intersection % | 6.04 | 7.97 | 5.53 | 0.00 | 19.54 | 5.53 | 5.74 | 2.30 | 0.00 | 13.57 | 2.03 | 26.96 | 4.61 | 0.00 | 33.60 | 4.77 | 24.20 | 4.31 | 0.00 | 33.28 |

Canton, GA
Classified Turn Movement Count

Site 20 of 23
E Cherokee Dr (South)
E Cherokee Dr (North)
GA-20 Cumming Hwy (West)
GA-20 Cumming Hwy (East)

Lat/Long
34.253797°, -84.360451°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0700 - 0900 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 0700 - 0715 | 2 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 9 | 1 | 0 | 10 |
| 0715 - 0730 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 10 | 1 | 0 | 11 |
| 0730 - 0745 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 1 | 0 | 17 | 0 | 11 | 1 | 0 | 12 |
| 0745 - 0800 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 9 | 3 | 0 | 13 | 1 | 16 | 0 | 0 | 17 |
| Hourly Total | 4 | 4 | 5 | 0 | 13 | 1 | 0 | 0 | 0 | 1 | 1 | 46 | 4 | 0 | 51 | 1 | 46 | 3 | 0 | 50 |
| 0800 - 0815 | 1 | 4 | 1 | 0 | 6 | 1 | 7 | 1 | 0 | 9 | 0 | 9 | 3 | 0 | 12 | 3 | 17 | 2 | 0 | 22 |
| 0815 - 0830 | 3 | 6 | 2 | 0 | 11 | 0 | 5 | 0 | 0 | 5 | 0 | 14 | 1 | 0 | 15 | 2 | 9 | 1 | 0 | 12 |
| 0830 - 0845 | 1 | 2 | 1 | 0 | 4 | 0 | 1 | 1 | 0 | 2 | 1 | 19 | 2 | 0 | 22 | 1 | 13 | 1 | 0 | 15 |
| 0845 - 0900 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 9 | 1 | 0 | 10 | 1 | 13 | 4 | 0 | 18 |
| Hourly Total | 5 | 12 | 5 | 0 | 22 | 1 | 13 | 3 | 0 | 17 | 1 | 51 | 7 | 0 | 59 | 7 | 52 | 8 | 0 | 67 |
| Grand Total | 9 | 16 | 10 | 0 | 35 | 2 | 13 | 3 | 0 | 18 | 2 | 97 | 11 | 0 | 110 | 8 | 98 | 11 | 0 | 117 |
| Approach % | 25.71 | 45.71 | 28.57 | 0.00 | - | 11.11 | 72.22 | 16.67 | 0.00 | - | 1.82 | 88.18 | 10.00 | 0.00 | - | 6.84 | 83.76 | 9.40 | 0.00 | - |
| Intersection % | 3.21 | 5.71 | 3.57 | 0.00 | 12.50 | 0.71 | 4.64 | 1.07 | 0.00 | 6.43 | 0.71 | 34.64 | 3.93 | 0.00 | 39.29 | 2.86 | 35.00 | 3.93 | 0.00 | 41.79 |

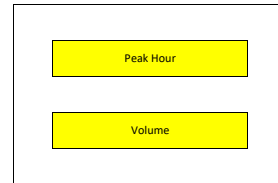
1600 - 1800 (Weekday 2h Session) (13-02-2020)
Heavy Vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
|----------------|-----------------------|--------------|---------------|----------------|--------------|-----------------------|--------------|---------------|----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|--------------------------|---------------|----------------|-----------------|--------------|
| | E Cherokee Dr (South) | | | | | E Cherokee Dr (North) | | | | | GA-20 Cumming Hwy (West) | | | | | GA-20 Cumming Hwy (East) | | | | |
| | Left 20.1 | Thru 20.2 | Right 20.3 | U-Turn 20.4 | App Total | Left 20.5 | Thru 20.6 | Right 20.7 | U-Turn 20.8 | App Total | Left 20.9 | Thru 20.10 | Right 20.11 | U-Turn 20.12 | App Total | Left 20.13 | Thru 20.14 | Right 20.15 | U-Turn 20.16 | App Total |
| 1600 - 1615 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 12 | 1 | 0 | 13 | 2 | 9 | 0 | 0 | 11 |
| 1615 - 1630 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 4 | 1 | 7 | 0 | 0 | 8 | 4 | 11 | 1 | 0 | 16 |
| 1630 - 1645 | 3 | 0 | 1 | 0 | 4 | 1 | 2 | 0 | 0 | 3 | 0 | 10 | 2 | 0 | 12 | 1 | 13 | 0 | 0 | 14 |
| 1645 - 1700 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | 0 | 9 | 3 | 0 | 12 | 0 | 6 | 1 | 0 | 7 |
| Hourly Total | 5 | 0 | 4 | 0 | 9 | 2 | 6 | 2 | 0 | 10 | 1 | 38 | 6 | 0 | 45 | 7 | 39 | 2 | 0 | 48 |
| 1700 - 1715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 11 | 0 | 0 | 11 | 0 | 9 | 0 | 0 | 9 |
| 1715 - 1730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 9 | 0 | 10 | 1 | 0 | 11 |
| 1730 - 1745 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 0 | 10 | 1 | 13 | 0 | 0 | 14 |
| 1745 - 1800 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 1 | 7 | 2 | 0 | 10 |
| Hourly Total | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 3 | 2 | 33 | 0 | 0 | 35 | 2 | 39 | 3 | 0 | 44 |
| Grand Total | 6 | 0 | 4 | 0 | 10 | 3 | 6 | 4 | 0 | 13 | 3 | 71 | 6 | 0 | 80 | 9 | 78 | 5 | 0 | 92 |
| Approach % | 60.00 | 0.00 | 40.00 | 0.00 | - | 23.08 | 46.15 | 30.77 | 0.00 | - | 3.75 | 88.75 | 7.50 | 0.00 | - | 9.78 | 84.78 | 5.43 | 0.00 | - |
| Intersection % | 3.08 | 0.00 | 2.05 | 0.00 | 5.13 | 1.54 | 3.08 | 2.05 | 0.00 | 6.67 | 1.54 | 36.41 | 3.08 | 0.00 | 41.03 | 4.62 | 40.00 | 2.56 | 0.00 | 47.18 |

Canton, GA
Peak Hour Turning Movement Count



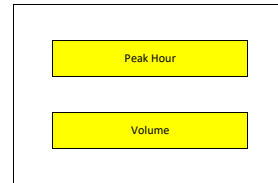
| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 0900 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 0730 - 0830 |



Canton, GA
Peak Hour Turning Movement Count



| Thursday, February 13, 2020 | |
|-----------------------------|---------------------------------------|
| Period | > 1800 (Weekday 2h Session) (13-02-2) |
| Peak Hour | 1700 - 1800 |



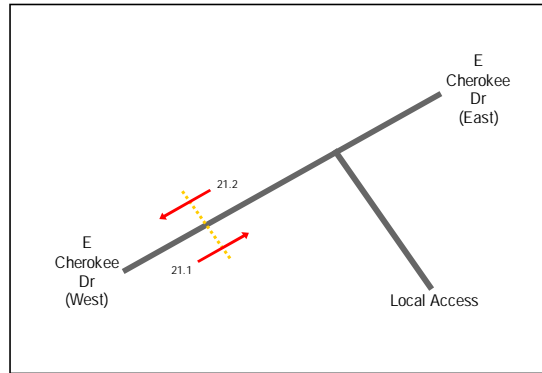
Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Eastbound, (Movement 21.1) | | | | | | | | | | | | | TOTAL |
|-------------|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 19 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 0100 - 0200 | 0 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 0200 - 0300 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| 0300 - 0400 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0400 - 0500 | 0 | 19 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 0500 - 0600 | 0 | 49 | 14 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 67 |
| 0600 - 0700 | 1 | 168 | 44 | 1 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 221 |
| 0700 - 0800 | 2 | 277 | 88 | 7 | 6 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 391 |
| 0800 - 0900 | 0 | 325 | 101 | 7 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 451 |
| 0900 - 1000 | 2 | 215 | 78 | 5 | 10 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 323 |
| 1000 - 1100 | 0 | 234 | 65 | 1 | 7 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 312 |
| 1100 - 1200 | 2 | 265 | 76 | 6 | 10 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 364 |
| 1200 - 1300 | 0 | 261 | 74 | 0 | 7 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 352 |
| 1300 - 1400 | 0 | 303 | 90 | 4 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 410 |
| 1400 - 1500 | 0 | 317 | 89 | 1 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 419 |
| 1500 - 1600 | 0 | 389 | 99 | 6 | 12 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 513 |
| 1600 - 1700 | 0 | 408 | 111 | 3 | 9 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 546 |
| 1700 - 1800 | 1 | 396 | 96 | 5 | 6 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 524 |
| 1800 - 1900 | 0 | 340 | 69 | 6 | 8 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 428 |
| 1900 - 2000 | 0 | 290 | 59 | 1 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 358 |
| 2000 - 2100 | 0 | 246 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 |
| 2100 - 2200 | 0 | 169 | 38 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 213 |
| 2200 - 2300 | 0 | 83 | 17 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 101 |
| 2300 - 2400 | 0 | 46 | 15 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 62 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 8 | 4841 | 1281 | 57 | 103 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 6422 |
| Session Average | 0.33 | 201.71 | 53.38 | 2.38 | 4.29 | 0.00 | 0.00 | 5.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 267.58 |
| Session Percentage | 0.12 | 75.38 | 19.95 | 0.89 | 1.60 | 0.00 | 0.00 | 2.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0800 - 0900 | 0900 - 1000 | 0900 - 1000 | 0800 - 0900 | 1000 - 1100 | - | - | 1000 - 1100 | - | - | - | - | - | 0900 - 1000 |
| AM Peak Hour Volume | 2 | 325 | 101 | 7 | 10 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 451 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1200 - 1300 | 1500 - 1600 | 1400 - 1500 | 1200 - 1300 | 1200 - 1300 | - | - | 1300 - 1400 | - | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 2 | 317 | 90 | 6 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 419 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| PM Peak Hour | 1800 - 1900 | 1700 - 1800 | 1700 - 1800 | 1600 - 1700 | 1600 - 1700 | - | - | 1800 - 1900 | - | - | - | - | - | 1700 - 1800 |
| PM Peak Hour Volume | 1 | 408 | 111 | 6 | 12 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 546 |

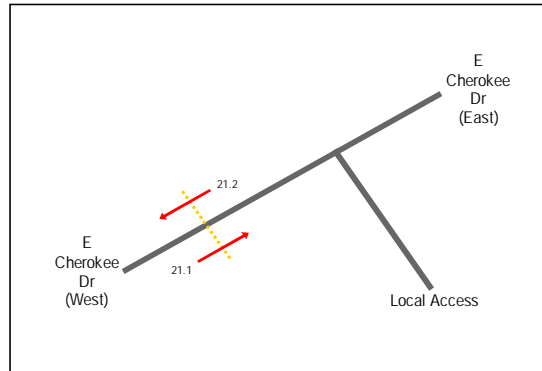
Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| | Westbound, (Movement 21.2) | | | | | | | | | | | | | |
|-------------|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| TIME | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | TOTAL |
| 0000 - 0100 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 0100 - 0200 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 0200 - 0300 | 0 | 8 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 0300 - 0400 | 0 | 5 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0400 - 0500 | 0 | 34 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 0500 - 0600 | 0 | 68 | 19 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| 0600 - 0700 | 0 | 265 | 82 | 1 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 356 |
| 0700 - 0800 | 2 | 402 | 129 | 6 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 555 |
| 0800 - 0900 | 1 | 453 | 100 | 4 | 9 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 571 |
| 0900 - 1000 | 0 | 337 | 88 | 3 | 9 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 440 |
| 1000 - 1100 | 0 | 297 | 83 | 2 | 12 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 396 |
| 1100 - 1200 | 0 | 290 | 85 | 3 | 10 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 391 |
| 1200 - 1300 | 1 | 269 | 82 | 2 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 361 |
| 1300 - 1400 | 0 | 283 | 73 | 3 | 12 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 375 |
| 1400 - 1500 | 1 | 278 | 84 | 1 | 13 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 383 |
| 1500 - 1600 | 0 | 315 | 100 | 9 | 18 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 444 |
| 1600 - 1700 | 3 | 403 | 107 | 5 | 5 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 530 |
| 1700 - 1800 | 1 | 429 | 94 | 1 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 535 |
| 1800 - 1900 | 1 | 368 | 88 | 5 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 467 |
| 1900 - 2000 | 1 | 215 | 50 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 271 |
| 2000 - 2100 | 0 | 175 | 23 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 201 |
| 2100 - 2200 | 0 | 111 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 |
| 2200 - 2300 | 0 | 55 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| 2300 - 2400 | 0 | 45 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 11 | 5123 | 1340 | 47 | 123 | 0 | 0 | 51 | 1 | 1 | 1 | 0 | 0 | 6698 |
| Session Average | 0.46 | 213.46 | 55.83 | 1.96 | 5.13 | 0.00 | 0.00 | 2.13 | 0.04 | 0.04 | 0.04 | 0.00 | 0.00 | 279.08 |
| Session Percentage | 0.16 | 76.49 | 20.01 | 0.70 | 1.84 | 0.00 | 0.00 | 0.76 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0800 - 0900 | 0900 - 1000 | 0800 - 0900 | 0800 - 0900 | 0900 - 1000 | - | - | 0800 - 0900 | - | - | - | - | - | 0900 - 1000 |
| AM Peak Hour Volume | 2 | 453 | 129 | 6 | 9 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 571 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|-------------|---|---|---|---|-------------|
| Noon Peak Hour | 1300 - 1400 | 1100 - 1200 | 1200 - 1300 | 1200 - 1300 | 1500 - 1600 | - | - | 1500 - 1600 | 1500 - 1600 | - | - | - | - | 1100 - 1200 |
| Noon Peak Hour Volume | 1 | 297 | 85 | 3 | 13 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 396 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|-------------|-------------|---|---|-------------|
| PM Peak Hour | 1700 - 1800 | 1800 - 1900 | 1700 - 1800 | 1600 - 1700 | 1600 - 1700 | - | - | 1700 - 1800 | - | 1700 - 1800 | 1900 - 2000 | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 3 | 429 | 107 | 9 | 18 | 0 | 0 | 6 | 0 | 1 | 1 | 0 | 0 | 535 |

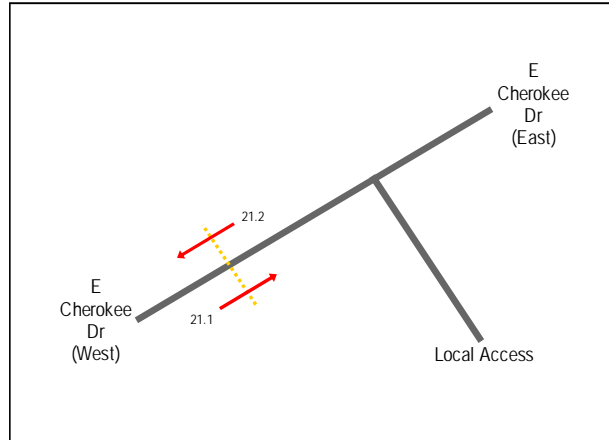
Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Eastbound, (Movement 21.1) | | | | | | | | | | | | | | | TOTAL |
|---------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 6 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 14 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0400 - 0500 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 6 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 22 |
| 0500 - 0600 | 0 | 0 | 0 | 0 | 4 | 1 | 6 | 14 | 27 | 11 | 4 | 0 | 0 | 0 | 0 | 67 |
| 0600 - 0700 | 2 | 0 | 0 | 0 | 5 | 44 | 79 | 65 | 24 | 2 | 0 | 0 | 0 | 0 | 0 | 221 |
| 0700 - 0800 | 1 | 0 | 6 | 7 | 30 | 70 | 150 | 111 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| 0800 - 0900 | 3 | 4 | 2 | 11 | 21 | 73 | 224 | 93 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 451 |
| 0900 - 1000 | 0 | 1 | 3 | 4 | 12 | 57 | 113 | 87 | 39 | 6 | 1 | 0 | 0 | 0 | 0 | 323 |
| 1000 - 1100 | 0 | 0 | 3 | 6 | 13 | 32 | 92 | 111 | 48 | 7 | 0 | 0 | 0 | 0 | 0 | 312 |
| 1100 - 1200 | 4 | 3 | 9 | 16 | 28 | 49 | 99 | 103 | 48 | 5 | 0 | 0 | 0 | 0 | 0 | 364 |
| 1200 - 1300 | 0 | 0 | 0 | 5 | 16 | 41 | 92 | 131 | 61 | 6 | 0 | 0 | 0 | 0 | 0 | 352 |
| 1300 - 1400 | 0 | 2 | 4 | 14 | 33 | 56 | 106 | 125 | 64 | 6 | 0 | 0 | 0 | 0 | 0 | 410 |
| 1400 - 1500 | 1 | 0 | 1 | 8 | 16 | 66 | 124 | 124 | 70 | 9 | 0 | 0 | 0 | 0 | 0 | 419 |
| 1500 - 1600 | 1 | 0 | 2 | 20 | 42 | 100 | 156 | 130 | 55 | 7 | 0 | 0 | 0 | 0 | 0 | 513 |
| 1600 - 1700 | 4 | 6 | 20 | 37 | 87 | 80 | 136 | 129 | 42 | 5 | 0 | 0 | 0 | 0 | 0 | 546 |
| 1700 - 1800 | 2 | 3 | 14 | 24 | 41 | 82 | 136 | 154 | 58 | 9 | 1 | 0 | 0 | 0 | 0 | 524 |
| 1800 - 1900 | 2 | 11 | 13 | 18 | 37 | 59 | 113 | 126 | 40 | 8 | 1 | 0 | 0 | 0 | 0 | 428 |
| 1900 - 2000 | 1 | 3 | 2 | 9 | 30 | 62 | 89 | 112 | 44 | 6 | 0 | 0 | 0 | 0 | 0 | 358 |
| 2000 - 2100 | 0 | 0 | 0 | 3 | 8 | 26 | 74 | 104 | 61 | 15 | 0 | 0 | 0 | 0 | 0 | 291 |
| 2100 - 2200 | 0 | 0 | 3 | 9 | 12 | 17 | 43 | 74 | 50 | 5 | 0 | 0 | 0 | 0 | 0 | 213 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 1 | 5 | 23 | 30 | 32 | 10 | 0 | 0 | 0 | 0 | 0 | 101 |
| 2300 - 2400 | 0 | 0 | 0 | 1 | 1 | 5 | 12 | 25 | 12 | 3 | 3 | 0 | 0 | 0 | 0 | 62 |
| Session Total | 21 | 33 | 82 | 193 | 438 | 931 | 1884 | 1868 | 831 | 129 | 12 | 0 | 0 | 0 | 0 | 6422 |

| | |
|-----------------------|----|
| Average Speed | 43 |
| 85th Percentile Speed | 50 |

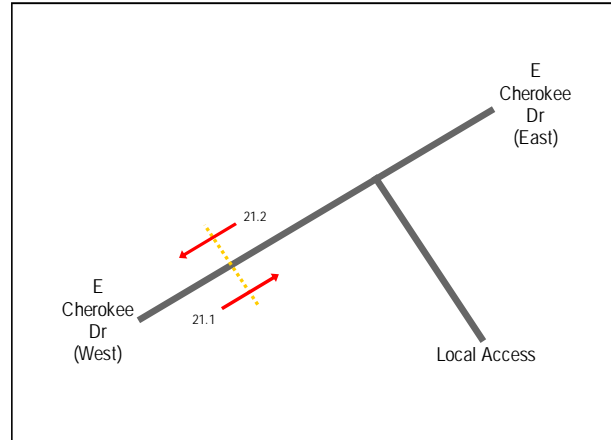
Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Westbound, (Movement 21.2) | | | | | | | | | | | | | | | TOTAL |
|---------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 13 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 9 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 14 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0400 - 0500 | 0 | 0 | 0 | 0 | 1 | 4 | 8 | 5 | 14 | 7 | 2 | 1 | 0 | 0 | 0 | 42 |
| 0500 - 0600 | 0 | 0 | 0 | 0 | 5 | 12 | 2 | 8 | 31 | 26 | 2 | 1 | 0 | 0 | 1 | 88 |
| 0600 - 0700 | 0 | 0 | 0 | 5 | 23 | 44 | 91 | 123 | 65 | 5 | 0 | 0 | 0 | 0 | 0 | 356 |
| 0700 - 0800 | 2 | 2 | 0 | 1 | 4 | 41 | 169 | 214 | 108 | 14 | 0 | 0 | 0 | 0 | 0 | 555 |
| 0800 - 0900 | 0 | 1 | 0 | 11 | 16 | 24 | 76 | 242 | 169 | 30 | 2 | 0 | 0 | 0 | 0 | 571 |
| 0900 - 1000 | 0 | 1 | 0 | 2 | 7 | 22 | 30 | 92 | 230 | 53 | 3 | 0 | 0 | 0 | 0 | 440 |
| 1000 - 1100 | 0 | 2 | 0 | 1 | 5 | 21 | 19 | 101 | 184 | 54 | 9 | 0 | 0 | 0 | 0 | 396 |
| 1100 - 1200 | 0 | 0 | 0 | 1 | 6 | 22 | 34 | 126 | 148 | 49 | 4 | 1 | 0 | 0 | 0 | 391 |
| 1200 - 1300 | 0 | 1 | 0 | 0 | 5 | 20 | 26 | 84 | 175 | 46 | 3 | 1 | 0 | 0 | 0 | 361 |
| 1300 - 1400 | 0 | 0 | 0 | 0 | 12 | 21 | 25 | 100 | 160 | 55 | 2 | 0 | 0 | 0 | 0 | 375 |
| 1400 - 1500 | 1 | 1 | 0 | 5 | 7 | 18 | 27 | 90 | 177 | 52 | 5 | 0 | 0 | 0 | 0 | 383 |
| 1500 - 1600 | 0 | 2 | 0 | 2 | 7 | 24 | 57 | 119 | 197 | 31 | 5 | 0 | 0 | 0 | 0 | 444 |
| 1600 - 1700 | 0 | 4 | 1 | 2 | 12 | 26 | 66 | 152 | 215 | 49 | 3 | 0 | 0 | 0 | 0 | 530 |
| 1700 - 1800 | 1 | 1 | 0 | 0 | 10 | 18 | 43 | 161 | 232 | 64 | 5 | 0 | 0 | 0 | 0 | 535 |
| 1800 - 1900 | 2 | 1 | 0 | 1 | 10 | 15 | 65 | 148 | 183 | 42 | 0 | 0 | 0 | 0 | 0 | 467 |
| 1900 - 2000 | 2 | 1 | 0 | 0 | 7 | 11 | 25 | 78 | 116 | 30 | 1 | 0 | 0 | 0 | 0 | 271 |
| 2000 - 2100 | 1 | 0 | 0 | 0 | 0 | 3 | 7 | 51 | 100 | 35 | 3 | 1 | 0 | 0 | 0 | 201 |
| 2100 - 2200 | 0 | 0 | 0 | 1 | 3 | 4 | 9 | 24 | 62 | 22 | 2 | 0 | 0 | 0 | 0 | 127 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 15 | 28 | 14 | 2 | 0 | 0 | 0 | 0 | 68 |
| 2300 - 2400 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 9 | 21 | 12 | 4 | 1 | 0 | 0 | 0 | 51 |
| Session Total | 9 | 17 | 1 | 32 | 145 | 356 | 791 | 1954 | 2630 | 698 | 58 | 6 | 0 | 0 | 1 | 6698 |

| | |
|-----------------------|----|
| Average Speed | 50 |
| 85th Percentile Speed | 53 |

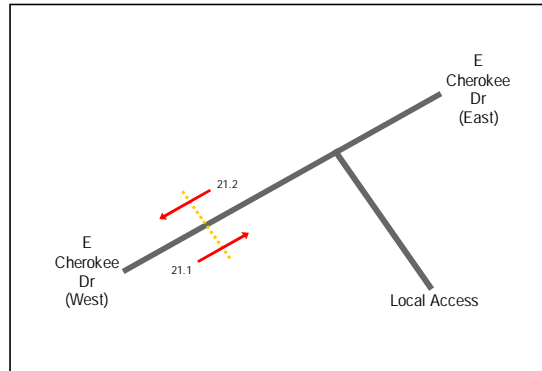
Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Bi-Directional 60min | | | | | | | | | | | | | TOTAL |
|-------------|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 30 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 0100 - 0200 | 0 | 18 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 0200 - 0300 | 0 | 13 | 7 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| 0300 - 0400 | 0 | 11 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 0400 - 0500 | 0 | 53 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 |
| 0500 - 0600 | 0 | 117 | 33 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 155 |
| 0600 - 0700 | 1 | 433 | 126 | 2 | 9 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 577 |
| 0700 - 0800 | 4 | 679 | 217 | 13 | 14 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 946 |
| 0800 - 0900 | 1 | 778 | 201 | 11 | 18 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 1022 |
| 0900 - 1000 | 2 | 552 | 166 | 8 | 19 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 763 |
| 1000 - 1100 | 0 | 531 | 148 | 3 | 19 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 708 |
| 1100 - 1200 | 2 | 555 | 161 | 9 | 20 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 755 |
| 1200 - 1300 | 1 | 530 | 156 | 2 | 11 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 713 |
| 1300 - 1400 | 0 | 586 | 163 | 7 | 18 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 785 |
| 1400 - 1500 | 1 | 595 | 173 | 2 | 17 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 802 |
| 1500 - 1600 | 0 | 704 | 199 | 15 | 30 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 957 |
| 1600 - 1700 | 3 | 811 | 218 | 8 | 14 | 0 | 0 | 21 | 0 | 1 | 0 | 0 | 0 | 1076 |
| 1700 - 1800 | 2 | 825 | 190 | 6 | 14 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 1059 |
| 1800 - 1900 | 1 | 708 | 157 | 11 | 10 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 895 |
| 1900 - 2000 | 1 | 505 | 109 | 2 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 629 |
| 2000 - 2100 | 0 | 421 | 68 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 492 |
| 2100 - 2200 | 0 | 280 | 54 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 340 |
| 2200 - 2300 | 0 | 138 | 29 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 169 |
| 2300 - 2400 | 0 | 91 | 21 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 113 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|--------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 19 | 9964 | 2621 | 104 | 226 | 0 | 0 | 183 | 1 | 1 | 1 | 0 | 0 | 13120 |
| Session Average | 0.79 | 415.17 | 109.21 | 4.33 | 9.42 | 0.00 | 0.00 | 7.63 | 0.04 | 0.04 | 0.04 | 0.00 | 0.00 | 546.67 |
| Session Percentage | 0.14 | 75.95 | 19.98 | 0.79 | 1.72 | 0.00 | 0.00 | 1.39 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0800 - 0900 | 0900 - 1000 | 0800 - 0900 | 0800 - 0900 | 1000 - 1100 | - | - | 0800 - 0900 | - | - | - | - | - | 0900 - 1000 |
| AM Peak Hour Volume | 4 | 778 | 217 | 13 | 19 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 1022 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|-------------|---|---|---|---|-------------|
| Noon Peak Hour | 1200 - 1300 | 1500 - 1600 | 1500 - 1600 | 1200 - 1300 | 1200 - 1300 | - | - | 1300 - 1400 | 1500 - 1600 | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 2 | 595 | 173 | 9 | 20 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 802 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|-------------|-------------|---|---|-------------|
| PM Peak Hour | 1700 - 1800 | 1800 - 1900 | 1700 - 1800 | 1600 - 1700 | 1600 - 1700 | - | - | 1800 - 1900 | - | 1700 - 1800 | 1900 - 2000 | - | - | 1700 - 1800 |
| PM Peak Hour Volume | 3 | 825 | 218 | 15 | 30 | 0 | 0 | 22 | 0 | 1 | 1 | 0 | 0 | 1076 |

Canton, GA
Classified Traffic Count

Site 21
E Cherokee Dr,
west of Local Access

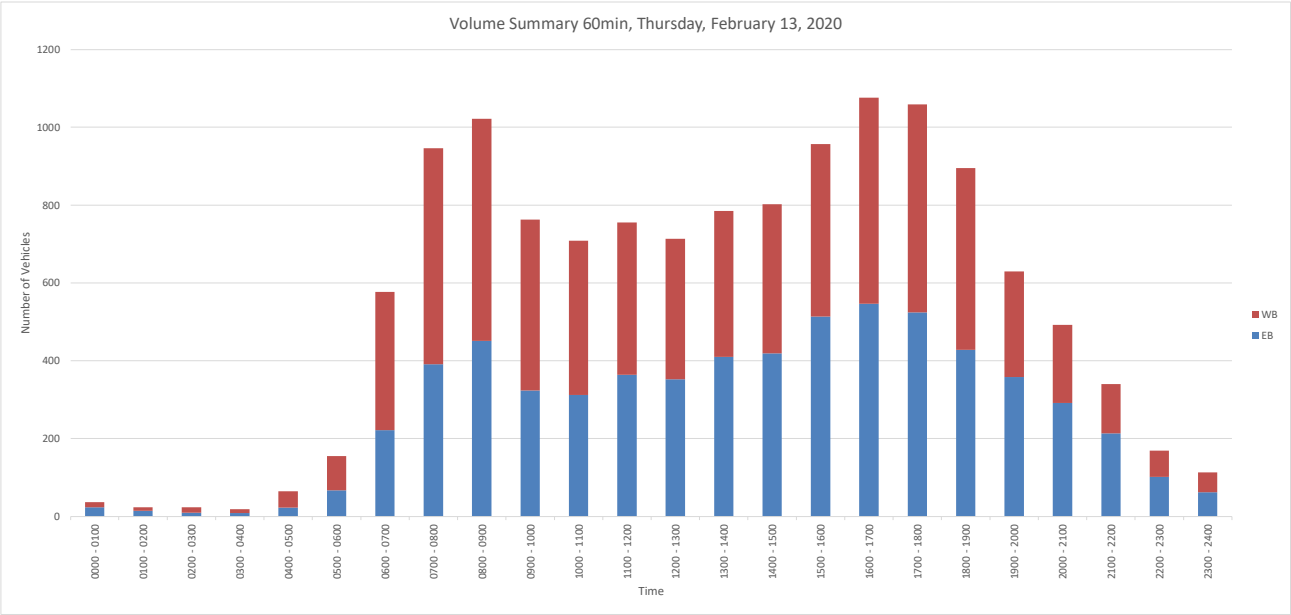
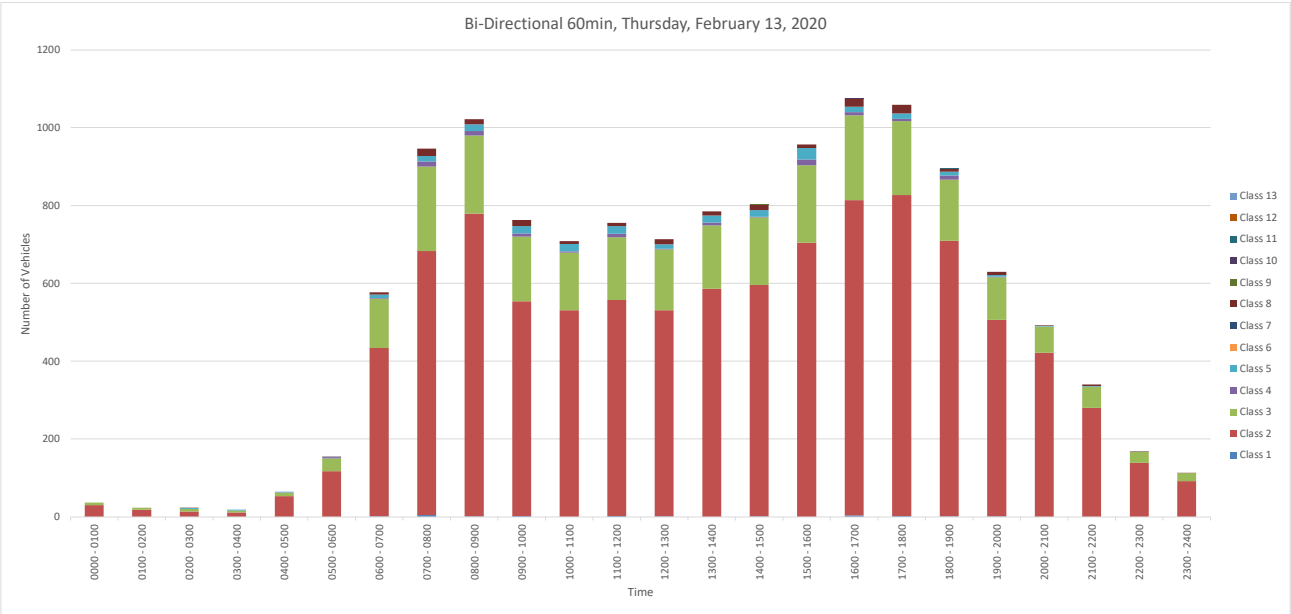
Lat/Long
34.143456°, -84.450764°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0000 - 2400 (Weekday 24h Session)

| Volume Summary 60min | | | |
|----------------------|--------|--------|--------|
| TIME | EB | WB | TOTAL |
| 0000 - 0100 | 23 | 13 | 36 |
| 0100 - 0200 | 14 | 9 | 23 |
| 0200 - 0300 | 9 | 14 | 23 |
| 0300 - 0400 | 8 | 10 | 18 |
| 0400 - 0500 | 22 | 42 | 64 |
| 0500 - 0600 | 67 | 88 | 155 |
| 0600 - 0700 | 221 | 356 | 577 |
| 0700 - 0800 | 391 | 555 | 946 |
| 0800 - 0900 | 451 | 571 | 1022 |
| 0900 - 1000 | 323 | 440 | 763 |
| 1000 - 1100 | 312 | 396 | 708 |
| 1100 - 1200 | 364 | 391 | 755 |
| 1200 - 1300 | 352 | 361 | 713 |
| 1300 - 1400 | 410 | 375 | 785 |
| 1400 - 1500 | 419 | 383 | 802 |
| 1500 - 1600 | 513 | 444 | 957 |
| 1600 - 1700 | 546 | 530 | 1076 |
| 1700 - 1800 | 524 | 535 | 1059 |
| 1800 - 1900 | 428 | 467 | 895 |
| 1900 - 2000 | 358 | 271 | 629 |
| 2000 - 2100 | 291 | 201 | 492 |
| 2100 - 2200 | 213 | 127 | 340 |
| 2200 - 2300 | 101 | 68 | 169 |
| 2300 - 2400 | 62 | 51 | 113 |
| Session Total | 6422 | 6698 | 13120 |
| Session Average | 267.58 | 279.08 | 546.67 |
| Session Percentage | 48.95 | 51.05 | |



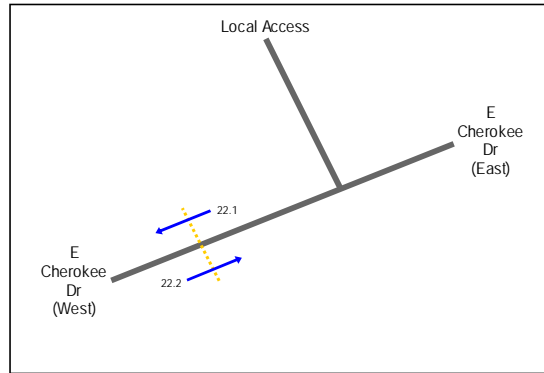
Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Eastbound, (Movement 22.1) | | | | | | | | | | | | | TOTAL |
|-------------|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 0100 - 0200 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 0200 - 0300 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 0300 - 0400 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0400 - 0500 | 0 | 15 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 0500 - 0600 | 0 | 79 | 24 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 0600 - 0700 | 0 | 164 | 50 | 5 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 226 |
| 0700 - 0800 | 3 | 352 | 111 | 2 | 12 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 485 |
| 0800 - 0900 | 4 | 339 | 103 | 10 | 7 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 466 |
| 0900 - 1000 | 0 | 217 | 72 | 3 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 301 |
| 1000 - 1100 | 1 | 188 | 75 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 273 |
| 1100 - 1200 | 0 | 216 | 80 | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 304 |
| 1200 - 1300 | 1 | 240 | 80 | 2 | 9 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 339 |
| 1300 - 1400 | 0 | 220 | 55 | 4 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 294 |
| 1400 - 1500 | 0 | 222 | 66 | 3 | 7 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 300 |
| 1500 - 1600 | 2 | 280 | 85 | 7 | 16 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 398 |
| 1600 - 1700 | 1 | 358 | 127 | 6 | 11 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 513 |
| 1700 - 1800 | 0 | 379 | 106 | 3 | 12 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 512 |
| 1800 - 1900 | 3 | 286 | 89 | 0 | 7 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 394 |
| 1900 - 2000 | 1 | 135 | 54 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 196 |
| 2000 - 2100 | 0 | 120 | 23 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 144 |
| 2100 - 2200 | 0 | 71 | 23 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 |
| 2200 - 2300 | 0 | 31 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 2300 - 2400 | 0 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 17 | 3936 | 1240 | 47 | 125 | 1 | 0 | 71 | 2 | 0 | 0 | 0 | 0 | 5439 |
| Session Average | 0.71 | 164.00 | 51.67 | 1.96 | 5.21 | 0.04 | 0.00 | 2.96 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 226.63 |
| Session Percentage | 0.31 | 72.37 | 22.80 | 0.86 | 2.30 | 0.02 | 0.00 | 1.31 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0900 - 1000 | 0800 - 0900 | 0800 - 0900 | 0900 - 1000 | 0800 - 0900 | - | - | 0800 - 0900 | - | - | - | - | - | 0800 - 0900 |
| AM Peak Hour Volume | 4 | 352 | 111 | 10 | 12 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 485 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1100 - 1200 | 1300 - 1400 | 1200 - 1300 | 1400 - 1500 | 1400 - 1500 | 1500 - 1600 | - | 1300 - 1400 | - | - | - | - | - | 1300 - 1400 |
| Noon Peak Hour Volume | 1 | 240 | 80 | 4 | 11 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 339 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|-------------|---|---|---|---|-------------|
| PM Peak Hour | 1900 - 2000 | 1800 - 1900 | 1700 - 1800 | 1600 - 1700 | 1600 - 1700 | - | - | 1800 - 1900 | 1800 - 1900 | - | - | - | - | 1700 - 1800 |
| PM Peak Hour Volume | 3 | 379 | 127 | 7 | 16 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 513 |

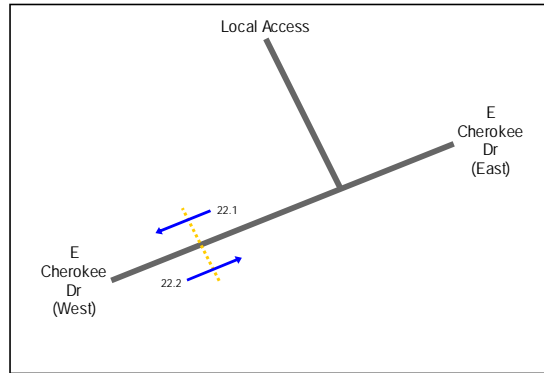
Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| Westbound, (Movement 22.2) | | | | | | | | | | | | | | |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| TIME | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | TOTAL |
| 0000 - 0100 | 0 | 11 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14 |
| 0100 - 0200 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0200 - 0300 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 0300 - 0400 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0400 - 0500 | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 0500 - 0600 | 0 | 20 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 0600 - 0700 | 0 | 92 | 41 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 0700 - 0800 | 0 | 262 | 91 | 7 | 8 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 372 |
| 0800 - 0900 | 1 | 151 | 90 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 254 |
| 0900 - 1000 | 0 | 118 | 100 | 2 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 232 |
| 1000 - 1100 | 0 | 115 | 70 | 4 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 203 |
| 1100 - 1200 | 0 | 111 | 72 | 4 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 202 |
| 1200 - 1300 | 1 | 201 | 85 | 1 | 17 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 308 |
| 1300 - 1400 | 0 | 184 | 98 | 3 | 15 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 304 |
| 1400 - 1500 | 0 | 238 | 118 | 5 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 373 |
| 1500 - 1600 | 0 | 246 | 122 | 3 | 21 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 394 |
| 1600 - 1700 | 1 | 281 | 114 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 414 |
| 1700 - 1800 | 1 | 331 | 135 | 1 | 10 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 480 |
| 1800 - 1900 | 0 | 238 | 83 | 1 | 8 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 335 |
| 1900 - 2000 | 0 | 200 | 59 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 271 |
| 2000 - 2100 | 1 | 145 | 51 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 202 |
| 2100 - 2200 | 0 | 90 | 41 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 |
| 2200 - 2300 | 1 | 47 | 12 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 61 |
| 2300 - 2400 | 0 | 27 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 6 | 3123 | 1402 | 43 | 174 | 2 | 0 | 29 | 1 | 0 | 0 | 0 | 0 | 4780 |
| Session Average | 0.25 | 130.13 | 58.42 | 1.79 | 7.25 | 0.08 | 0.00 | 1.21 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 199.17 |
| Session Percentage | 0.13 | 65.33 | 29.33 | 0.90 | 3.64 | 0.04 | 0.00 | 0.61 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0900 - 1000 | 0800 - 0900 | 1000 - 1100 | 0800 - 0900 | 1000 - 1100 | - | - | 0800 - 0900 | - | - | - | - | - | 0800 - 0900 |
| AM Peak Hour Volume | 1 | 262 | 100 | 7 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 372 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1300 - 1400 | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1300 - 1400 | 1300 - 1400 | - | 1100 - 1200 | - | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 1 | 238 | 118 | 5 | 17 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 373 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| PM Peak Hour | 1700 - 1800 | 1800 - 1900 | 1800 - 1900 | 1700 - 1800 | 1600 - 1700 | 1800 - 1900 | - | 1900 - 2000 | - | - | - | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 1 | 331 | 135 | 6 | 21 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 480 |

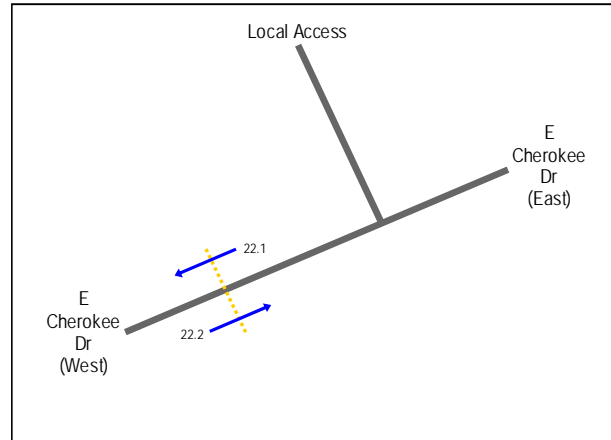
Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Eastbound, (Movement 22.1) | | | | | | | | | | | | | | | TOTAL |
|---------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0400 - 0500 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 18 |
| 0500 - 0600 | 0 | 0 | 0 | 0 | 0 | 3 | 26 | 35 | 33 | 10 | 1 | 0 | 0 | 0 | 0 | 108 |
| 0600 - 0700 | 1 | 0 | 1 | 1 | 18 | 53 | 100 | 40 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 226 |
| 0700 - 0800 | 2 | 1 | 0 | 3 | 32 | 138 | 206 | 79 | 22 | 2 | 0 | 0 | 0 | 0 | 0 | 485 |
| 0800 - 0900 | 2 | 2 | 0 | 15 | 33 | 72 | 148 | 149 | 41 | 4 | 0 | 0 | 0 | 0 | 0 | 466 |
| 0900 - 1000 | 1 | 1 | 0 | 3 | 20 | 20 | 59 | 125 | 64 | 6 | 2 | 0 | 0 | 0 | 0 | 301 |
| 1000 - 1100 | 0 | 1 | 0 | 0 | 0 | 22 | 77 | 106 | 58 | 7 | 2 | 0 | 0 | 0 | 0 | 273 |
| 1100 - 1200 | 1 | 0 | 0 | 1 | 7 | 22 | 86 | 109 | 70 | 8 | 0 | 0 | 0 | 0 | 0 | 304 |
| 1200 - 1300 | 1 | 0 | 1 | 1 | 7 | 30 | 92 | 130 | 69 | 8 | 0 | 0 | 0 | 0 | 0 | 339 |
| 1300 - 1400 | 0 | 1 | 0 | 2 | 9 | 32 | 72 | 111 | 54 | 9 | 4 | 0 | 0 | 0 | 0 | 294 |
| 1400 - 1500 | 2 | 0 | 0 | 2 | 11 | 21 | 89 | 95 | 69 | 11 | 0 | 0 | 0 | 0 | 0 | 300 |
| 1500 - 1600 | 1 | 7 | 2 | 11 | 33 | 47 | 92 | 124 | 68 | 13 | 0 | 0 | 0 | 0 | 0 | 398 |
| 1600 - 1700 | 2 | 0 | 0 | 4 | 13 | 55 | 198 | 161 | 71 | 8 | 1 | 0 | 0 | 0 | 0 | 513 |
| 1700 - 1800 | 0 | 0 | 0 | 2 | 16 | 100 | 206 | 122 | 58 | 7 | 1 | 0 | 0 | 0 | 0 | 512 |
| 1800 - 1900 | 1 | 2 | 0 | 0 | 23 | 62 | 128 | 115 | 57 | 6 | 0 | 0 | 0 | 0 | 0 | 394 |
| 1900 - 2000 | 0 | 2 | 1 | 4 | 4 | 12 | 51 | 76 | 39 | 7 | 0 | 0 | 0 | 0 | 0 | 196 |
| 2000 - 2100 | 0 | 0 | 0 | 0 | 2 | 7 | 24 | 45 | 57 | 9 | 0 | 0 | 0 | 0 | 0 | 144 |
| 2100 - 2200 | 0 | 0 | 0 | 0 | 0 | 3 | 19 | 35 | 29 | 8 | 1 | 0 | 0 | 0 | 0 | 95 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 15 | 11 | 3 | 1 | 1 | 0 | 0 | 0 | 36 |
| 2300 - 2400 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 15 |
| Session Total | 14 | 17 | 5 | 49 | 231 | 703 | 1691 | 1685 | 895 | 133 | 15 | 1 | 0 | 0 | 0 | 5439 |

| | |
|-----------------------|----|
| Average Speed | 44 |
| 85th Percentile Speed | 50 |

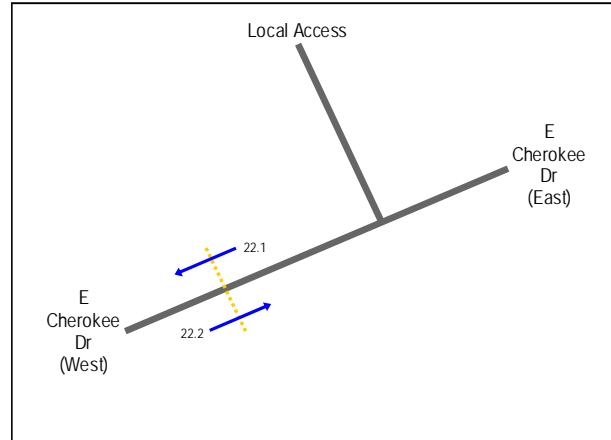
Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Westbound, (Movement 22.2) | | | | | | | | | | | | | | | TOTAL |
|---------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 14 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 10 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0400 - 0500 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| 0500 - 0600 | 0 | 0 | 0 | 0 | 1 | 1 | 7 | 4 | 6 | 3 | 2 | 0 | 0 | 0 | 0 | 24 |
| 0600 - 0700 | 0 | 0 | 0 | 0 | 6 | 19 | 64 | 39 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 144 |
| 0700 - 0800 | 0 | 0 | 0 | 0 | 2 | 31 | 134 | 125 | 65 | 14 | 0 | 1 | 0 | 0 | 0 | 372 |
| 0800 - 0900 | 0 | 0 | 0 | 0 | 0 | 13 | 49 | 73 | 82 | 29 | 7 | 1 | 0 | 0 | 0 | 254 |
| 0900 - 1000 | 0 | 0 | 0 | 0 | 2 | 5 | 28 | 58 | 98 | 36 | 5 | 0 | 0 | 0 | 0 | 232 |
| 1000 - 1100 | 0 | 0 | 0 | 1 | 0 | 16 | 37 | 57 | 60 | 24 | 6 | 2 | 0 | 0 | 0 | 203 |
| 1100 - 1200 | 0 | 0 | 0 | 0 | 1 | 8 | 17 | 50 | 80 | 37 | 6 | 2 | 1 | 0 | 0 | 202 |
| 1200 - 1300 | 0 | 1 | 0 | 0 | 1 | 6 | 34 | 74 | 145 | 41 | 6 | 0 | 0 | 0 | 0 | 308 |
| 1300 - 1400 | 0 | 0 | 0 | 0 | 2 | 11 | 40 | 70 | 130 | 46 | 5 | 0 | 0 | 0 | 0 | 304 |
| 1400 - 1500 | 0 | 0 | 0 | 0 | 0 | 16 | 58 | 105 | 140 | 48 | 5 | 1 | 0 | 0 | 0 | 373 |
| 1500 - 1600 | 0 | 0 | 0 | 0 | 1 | 10 | 55 | 116 | 154 | 50 | 6 | 2 | 0 | 0 | 0 | 394 |
| 1600 - 1700 | 0 | 1 | 0 | 0 | 0 | 11 | 52 | 115 | 182 | 51 | 2 | 0 | 0 | 0 | 0 | 414 |
| 1700 - 1800 | 1 | 2 | 0 | 0 | 1 | 15 | 59 | 141 | 191 | 68 | 2 | 0 | 0 | 0 | 0 | 480 |
| 1800 - 1900 | 1 | 0 | 0 | 0 | 4 | 16 | 46 | 89 | 124 | 44 | 9 | 2 | 0 | 0 | 0 | 335 |
| 1900 - 2000 | 0 | 0 | 1 | 0 | 2 | 6 | 37 | 100 | 90 | 32 | 3 | 0 | 0 | 0 | 0 | 271 |
| 2000 - 2100 | 1 | 0 | 0 | 0 | 0 | 7 | 27 | 72 | 65 | 28 | 2 | 0 | 0 | 0 | 0 | 202 |
| 2100 - 2200 | 0 | 0 | 0 | 0 | 0 | 7 | 22 | 44 | 45 | 12 | 3 | 0 | 0 | 0 | 0 | 133 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 2 | 4 | 8 | 18 | 13 | 12 | 2 | 2 | 0 | 0 | 0 | 61 |
| 2300 - 2400 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 12 | 4 | 2 | 1 | 0 | 0 | 0 | 36 |
| Session Total | 3 | 4 | 1 | 1 | 26 | 208 | 785 | 1371 | 1706 | 584 | 75 | 15 | 1 | 0 | 0 | 4780 |

| | |
|-----------------------|----|
| Average Speed | 49 |
| 85th Percentile Speed | 54 |

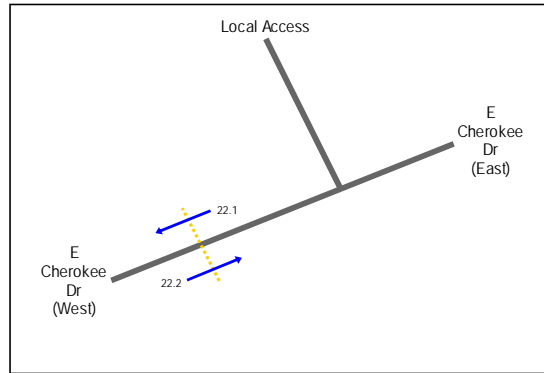
Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Bi-Directional 60min | | | | | | | | | | | | | TOTAL |
|-------------|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 15 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| 0100 - 0200 | 0 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 0200 - 0300 | 1 | 1 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0300 - 0400 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0400 - 0500 | 0 | 17 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 0500 - 0600 | 0 | 99 | 28 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| 0600 - 0700 | 0 | 256 | 91 | 10 | 10 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 370 |
| 0700 - 0800 | 3 | 614 | 202 | 9 | 20 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 857 |
| 0800 - 0900 | 5 | 490 | 193 | 10 | 16 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 720 |
| 0900 - 1000 | 0 | 335 | 172 | 5 | 19 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 533 |
| 1000 - 1100 | 1 | 303 | 145 | 4 | 16 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 476 |
| 1100 - 1200 | 0 | 327 | 152 | 6 | 17 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 506 |
| 1200 - 1300 | 2 | 441 | 165 | 3 | 26 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 647 |
| 1300 - 1400 | 0 | 404 | 153 | 7 | 26 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 598 |
| 1400 - 1500 | 0 | 460 | 184 | 8 | 18 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 673 |
| 1500 - 1600 | 2 | 526 | 207 | 10 | 37 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 792 |
| 1600 - 1700 | 2 | 639 | 241 | 12 | 23 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 927 |
| 1700 - 1800 | 1 | 710 | 241 | 4 | 22 | 1 | 0 | 12 | 1 | 0 | 0 | 0 | 0 | 992 |
| 1800 - 1900 | 3 | 524 | 172 | 1 | 15 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 729 |
| 1900 - 2000 | 1 | 335 | 113 | 1 | 15 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 467 |
| 2000 - 2100 | 1 | 265 | 74 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 346 |
| 2100 - 2200 | 0 | 161 | 64 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 228 |
| 2200 - 2300 | 1 | 78 | 17 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 97 |
| 2300 - 2400 | 0 | 39 | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|--------|------|-------|------|------|------|------|------|------|------|------|--------|
| Session Total | 23 | 7059 | 2642 | 90 | 299 | 3 | 0 | 100 | 3 | 0 | 0 | 0 | 0 | 10219 |
| Session Average | 0.96 | 294.13 | 110.08 | 3.75 | 12.46 | 0.13 | 0.00 | 4.17 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 425.79 |
| Session Percentage | 0.23 | 69.08 | 25.85 | 0.88 | 2.93 | 0.03 | 0.00 | 0.98 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0900 - 1000 | 0800 - 0900 | 0800 - 0900 | 0700 - 0800 | 0800 - 0900 | - | - | 0800 - 0900 | - | - | - | - | - | 0800 - 0900 |
| AM Peak Hour Volume | 5 | 614 | 202 | 10 | 20 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 857 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1300 - 1400 | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1300 - 1400 | 1300 - 1400 | - | 1300 - 1400 | - | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 2 | 460 | 184 | 8 | 26 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 673 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|-------------|---|---|---|---|-------------|
| PM Peak Hour | 1900 - 2000 | 1800 - 1900 | 1700 - 1800 | 1700 - 1800 | 1600 - 1700 | 1800 - 1900 | - | 1900 - 2000 | 1800 - 1900 | - | - | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 3 | 710 | 241 | 12 | 37 | 1 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | 992 |

Canton, GA
Classified Traffic Count

Site 22
E Cherokee Dr,
west of Local Access

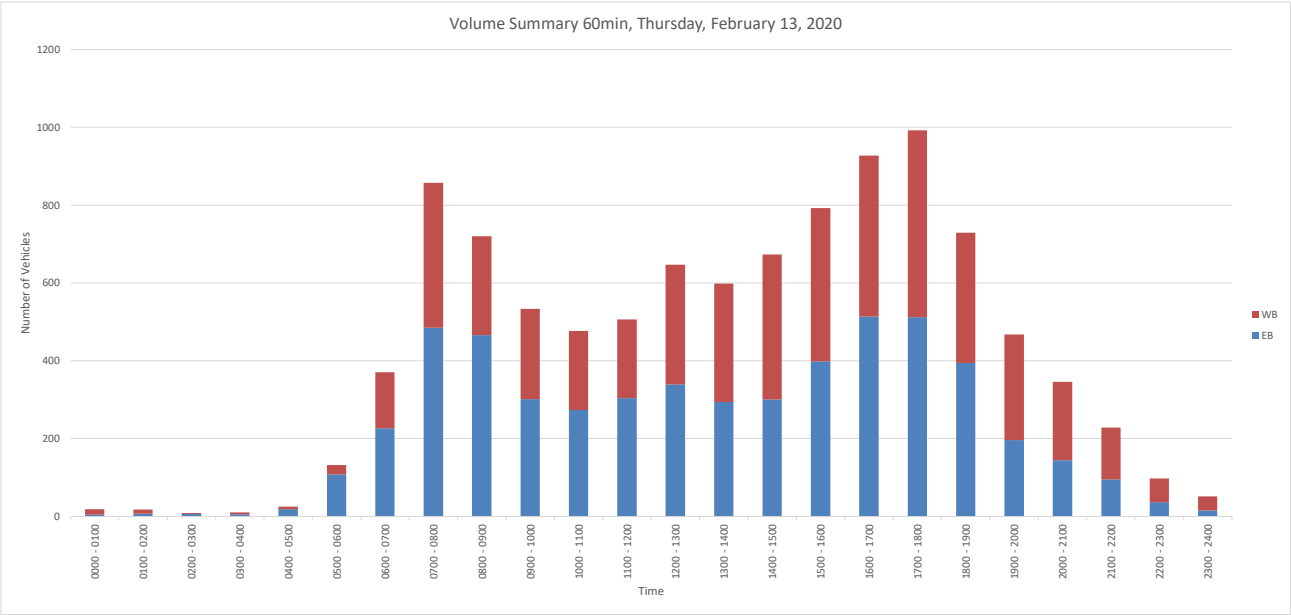
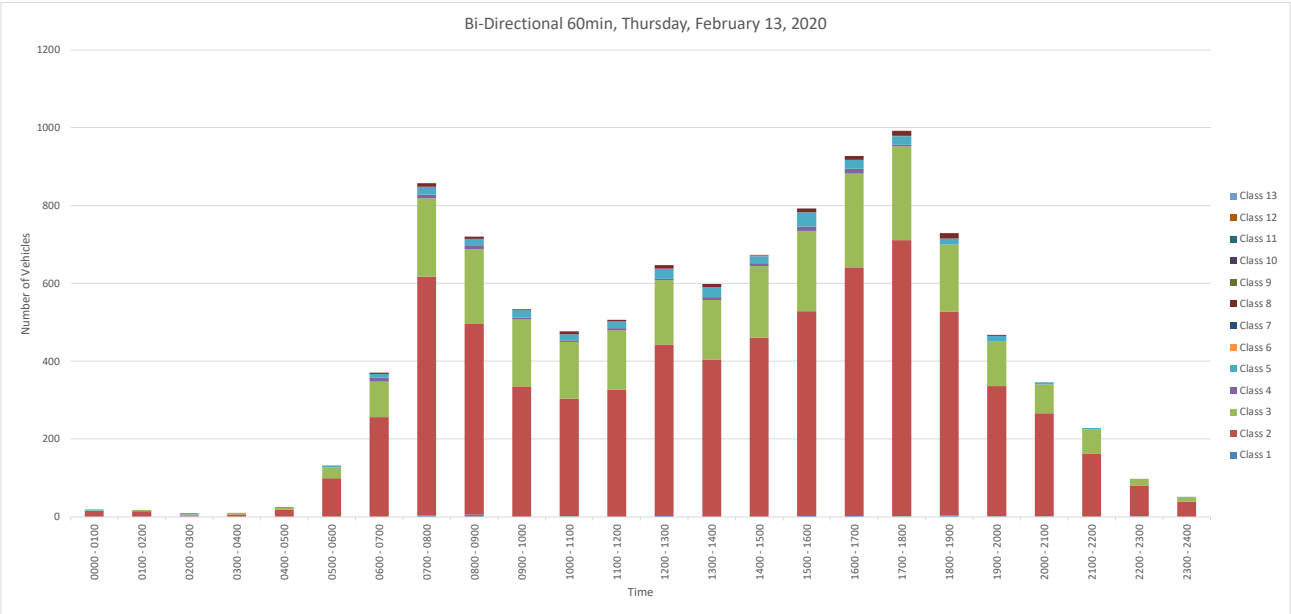
Lat/Long
34.207450°, -84.406594°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0000 - 2400 (Weekday 24h Session)

| Volume Summary 60min | | | |
|----------------------|--------|--------|--------|
| TIME | EB | WB | TOTAL |
| 0000 - 0100 | 4 | 14 | 18 |
| 0100 - 0200 | 7 | 10 | 17 |
| 0200 - 0300 | 6 | 2 | 8 |
| 0300 - 0400 | 5 | 5 | 10 |
| 0400 - 0500 | 18 | 7 | 25 |
| 0500 - 0600 | 108 | 24 | 132 |
| 0600 - 0700 | 226 | 144 | 370 |
| 0700 - 0800 | 485 | 372 | 857 |
| 0800 - 0900 | 466 | 254 | 720 |
| 0900 - 1000 | 301 | 232 | 533 |
| 1000 - 1100 | 273 | 203 | 476 |
| 1100 - 1200 | 304 | 202 | 506 |
| 1200 - 1300 | 339 | 308 | 647 |
| 1300 - 1400 | 294 | 304 | 598 |
| 1400 - 1500 | 300 | 373 | 673 |
| 1500 - 1600 | 398 | 394 | 792 |
| 1600 - 1700 | 513 | 414 | 927 |
| 1700 - 1800 | 512 | 480 | 992 |
| 1800 - 1900 | 394 | 335 | 729 |
| 1900 - 2000 | 196 | 271 | 467 |
| 2000 - 2100 | 144 | 202 | 346 |
| 2100 - 2200 | 95 | 133 | 228 |
| 2200 - 2300 | 36 | 61 | 97 |
| 2300 - 2400 | 15 | 36 | 51 |
| Session Total | 5439 | 4780 | 10219 |
| Session Average | 226.63 | 199.17 | 425.79 |
| Session Percentage | 53.22 | 46.78 | |



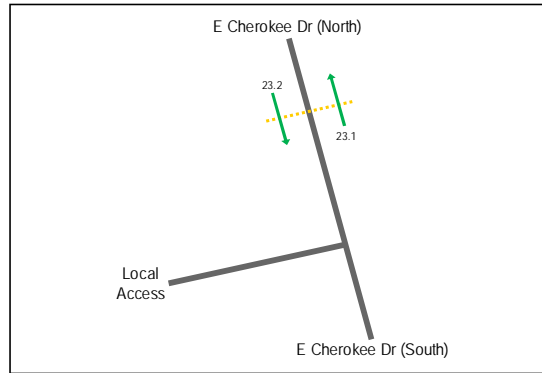
Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Northbound, (Movement 23.1) | | | | | | | | | | | | | TOTAL |
|-------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 0100 - 0200 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0200 - 0300 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 0300 - 0400 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0400 - 0500 | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 0500 - 0600 | 0 | 36 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 0600 - 0700 | 0 | 120 | 26 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 153 |
| 0700 - 0800 | 7 | 229 | 51 | 19 | 19 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 337 |
| 0800 - 0900 | 1 | 295 | 58 | 12 | 14 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 382 |
| 0900 - 1000 | 0 | 169 | 48 | 0 | 7 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 227 |
| 1000 - 1100 | 2 | 180 | 51 | 4 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 247 |
| 1100 - 1200 | 0 | 179 | 61 | 3 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 258 |
| 1200 - 1300 | 2 | 235 | 57 | 2 | 16 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 314 |
| 1300 - 1400 | 0 | 192 | 69 | 4 | 12 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 282 |
| 1400 - 1500 | 0 | 207 | 45 | 10 | 5 | 0 | 0 | 5 | 0 | 10 | 0 | 0 | 0 | 272 |
| 1500 - 1600 | 1 | 390 | 55 | 17 | 16 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 491 |
| 1600 - 1700 | 3 | 357 | 75 | 5 | 3 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 451 |
| 1700 - 1800 | 0 | 421 | 95 | 4 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 530 |
| 1800 - 1900 | 2 | 358 | 71 | 3 | 3 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 442 |
| 1900 - 2000 | 0 | 198 | 39 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 241 |
| 2000 - 2100 | 0 | 144 | 34 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 179 |
| 2100 - 2200 | 0 | 92 | 17 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 112 |
| 2200 - 2300 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 2300 - 2400 | 0 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Session Total | 18 | 3867 | 869 | 87 | 135 | 3 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 5038 |
| Session Average | 0.75 | 161.13 | 36.21 | 3.63 | 5.63 | 0.13 | 0.00 | 2.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 209.92 |
| Session Percentage | 0.36 | 76.76 | 17.25 | 1.73 | 2.68 | 0.06 | 0.00 | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| AM Peak Hour | 0800 - 0900 | 0900 - 1000 | 0900 - 1000 | 0800 - 0900 | 0800 - 0900 | 0800 - 0900 | - | 0800 - 0900 | - | - | - | - | - | 0900 - 1000 |
| AM Peak Hour Volume | 7 | 295 | 58 | 19 | 19 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 382 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|---|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1100 - 1200 | 1300 - 1400 | 1400 - 1500 | 1500 - 1600 | 1300 - 1400 | - | - | 1400 - 1500 | - | - | - | - | - | 1300 - 1400 |
| Noon Peak Hour Volume | 2 | 235 | 69 | 10 | 16 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 314 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| PM Peak Hour | 1700 - 1800 | 1800 - 1900 | 1800 - 1900 | 1600 - 1700 | 1600 - 1700 | 1600 - 1700 | - | 1600 - 1700 | - | - | - | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 3 | 421 | 95 | 17 | 16 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 530 |

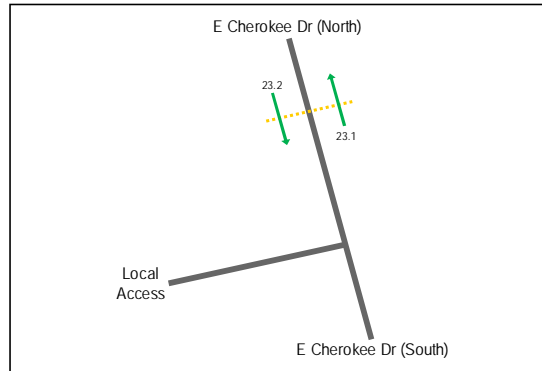
Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Southbound, (Movement 23.2) | | | | | | | | | | | | | TOTAL |
|-------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 7 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0100 - 0200 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 0200 - 0300 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 0300 - 0400 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 0400 - 0500 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0500 - 0600 | 0 | 20 | 9 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 34 |
| 0600 - 0700 | 0 | 65 | 50 | 3 | 12 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 132 |
| 0700 - 0800 | 0 | 262 | 144 | 17 | 12 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 438 |
| 0800 - 0900 | 0 | 145 | 122 | 11 | 25 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 306 |
| 0900 - 1000 | 0 | 74 | 89 | 1 | 35 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 201 |
| 1000 - 1100 | 0 | 57 | 79 | 3 | 31 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 176 |
| 1100 - 1200 | 1 | 83 | 115 | 2 | 35 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 239 |
| 1200 - 1300 | 0 | 87 | 115 | 3 | 36 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 246 |
| 1300 - 1400 | 0 | 99 | 116 | 1 | 34 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 258 |
| 1400 - 1500 | 4 | 158 | 141 | 18 | 27 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 350 |
| 1500 - 1600 | 1 | 150 | 155 | 17 | 35 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 360 |
| 1600 - 1700 | 1 | 147 | 181 | 6 | 42 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 388 |
| 1700 - 1800 | 1 | 186 | 169 | 0 | 40 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 402 |
| 1800 - 1900 | 0 | 150 | 146 | 2 | 26 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 327 |
| 1900 - 2000 | 0 | 126 | 135 | 0 | 35 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 298 |
| 2000 - 2100 | 0 | 133 | 153 | 0 | 29 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 316 |
| 2100 - 2200 | 0 | 71 | 65 | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 149 |
| 2200 - 2300 | 0 | 31 | 27 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 2300 - 2400 | 0 | 11 | 12 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |

| | | | | | | | | | | | | | | |
|--------------------|------|-------|-------|------|-------|------|------|------|------|------|------|------|------|--------|
| Session Total | 8 | 2072 | 2029 | 85 | 481 | 4 | 0 | 57 | 2 | 0 | 0 | 0 | 0 | 4738 |
| Session Average | 0.33 | 86.33 | 84.54 | 3.54 | 20.04 | 0.17 | 0.00 | 2.38 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 197.42 |
| Session Percentage | 0.17 | 43.73 | 42.82 | 1.79 | 10.15 | 0.08 | 0.00 | 1.20 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|---|-------------|-------------|-------------|-------------|---|---|-------------|-------------|---|---|---|---|-------------|
| AM Peak Hour | - | 0800 - 0900 | 0800 - 0900 | 0800 - 0900 | 1000 - 1100 | - | - | 0800 - 0900 | 0700 - 0800 | - | - | - | - | 0800 - 0900 |
| AM Peak Hour Volume | 0 | 262 | 144 | 17 | 35 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 438 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1300 - 1400 | 1300 - 1400 | - | 1400 - 1500 | - | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 4 | 158 | 141 | 18 | 36 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 350 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|-------------|---|---|---|---|-------------|
| PM Peak Hour | 1600 - 1700 | 1800 - 1900 | 1700 - 1800 | 1600 - 1700 | 1700 - 1800 | 1800 - 1900 | - | 1700 - 1800 | 1700 - 1800 | - | - | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 1 | 186 | 181 | 17 | 42 | 1 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 402 |

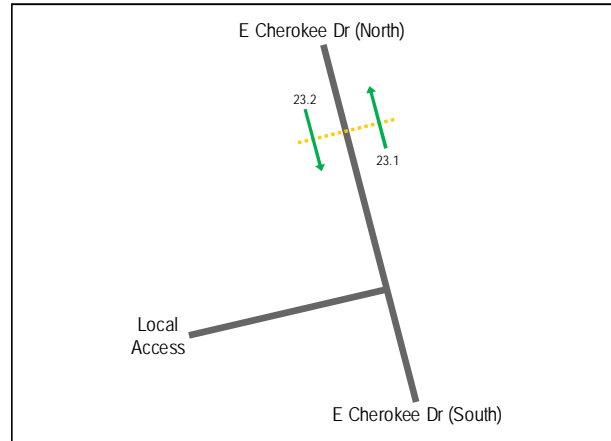
Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Northbound, (Movement 23.1) | | | | | | | | | | | | | | | TOTAL |
|---------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0400 - 0500 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 0500 - 0600 | 0 | 0 | 0 | 0 | 2 | 8 | 25 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 0600 - 0700 | 0 | 1 | 0 | 8 | 41 | 59 | 36 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 153 |
| 0700 - 0800 | 53 | 70 | 43 | 43 | 46 | 55 | 24 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 337 |
| 0800 - 0900 | 2 | 0 | 0 | 1 | 41 | 186 | 132 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 382 |
| 0900 - 1000 | 1 | 0 | 0 | 0 | 8 | 66 | 119 | 28 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 227 |
| 1000 - 1100 | 0 | 0 | 1 | 2 | 5 | 49 | 132 | 50 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 247 |
| 1100 - 1200 | 0 | 0 | 1 | 0 | 11 | 68 | 128 | 48 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 258 |
| 1200 - 1300 | 1 | 1 | 0 | 1 | 11 | 79 | 158 | 58 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 314 |
| 1300 - 1400 | 0 | 0 | 0 | 0 | 17 | 66 | 158 | 40 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 282 |
| 1400 - 1500 | 6 | 16 | 21 | 63 | 63 | 55 | 41 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 272 |
| 1500 - 1600 | 28 | 26 | 19 | 19 | 66 | 177 | 142 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 491 |
| 1600 - 1700 | 4 | 3 | 3 | 2 | 26 | 153 | 224 | 35 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 451 |
| 1700 - 1800 | 2 | 1 | 0 | 10 | 42 | 221 | 229 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 530 |
| 1800 - 1900 | 2 | 1 | 6 | 10 | 39 | 177 | 176 | 29 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 442 |
| 1900 - 2000 | 0 | 0 | 0 | 0 | 7 | 61 | 139 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 241 |
| 2000 - 2100 | 0 | 0 | 0 | 0 | 4 | 32 | 108 | 34 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 179 |
| 2100 - 2200 | 0 | 0 | 0 | 0 | 0 | 21 | 62 | 25 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 2300 - 2400 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| Session Total | 99 | 119 | 94 | 159 | 430 | 1544 | 2065 | 487 | 39 | 1 | 0 | 1 | 0 | 0 | 0 | 5038 |

| | |
|-----------------------|----|
| Average Speed | 38 |
| 85th Percentile Speed | 43 |

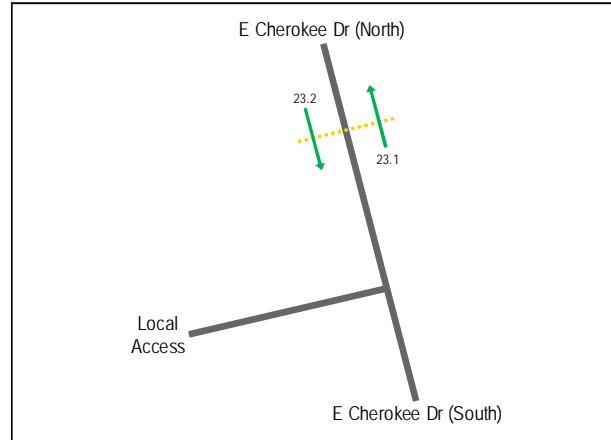
Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Southbound, (Movement 23.2) | | | | | | | | | | | | | | | TOTAL |
|---------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 5-14 mph | 15-19 mph | 20-24 mph | 25-29 mph | 30-34 mph | 35-39 mph | 40-44 mph | 45-49 mph | 50-54 mph | 55-59 mph | 60-64 mph | 65-69 mph | 70-74 mph | 75-79 mph | 80-99 mph | |
| 0000 - 0100 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 10 |
| 0100 - 0200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 0200 - 0300 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 0300 - 0400 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 0400 - 0500 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 0500 - 0600 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 12 | 8 | 7 | 1 | 1 | 0 | 0 | 0 | 34 |
| 0600 - 0700 | 0 | 0 | 0 | 1 | 4 | 21 | 40 | 41 | 18 | 6 | 1 | 0 | 0 | 0 | 0 | 132 |
| 0700 - 0800 | 7 | 1 | 0 | 32 | 125 | 145 | 82 | 30 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 438 |
| 0800 - 0900 | 0 | 0 | 0 | 0 | 1 | 31 | 80 | 112 | 63 | 17 | 1 | 1 | 0 | 0 | 0 | 306 |
| 0900 - 1000 | 0 | 0 | 0 | 0 | 0 | 4 | 29 | 81 | 58 | 22 | 5 | 2 | 0 | 0 | 0 | 201 |
| 1000 - 1100 | 0 | 0 | 0 | 2 | 1 | 4 | 21 | 55 | 63 | 25 | 4 | 1 | 0 | 0 | 0 | 176 |
| 1100 - 1200 | 0 | 0 | 0 | 0 | 1 | 9 | 27 | 84 | 78 | 28 | 12 | 0 | 0 | 0 | 0 | 239 |
| 1200 - 1300 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 85 | 87 | 28 | 7 | 2 | 0 | 0 | 1 | 246 |
| 1300 - 1400 | 0 | 1 | 5 | 0 | 0 | 8 | 38 | 90 | 84 | 29 | 0 | 2 | 1 | 0 | 0 | 258 |
| 1400 - 1500 | 3 | 0 | 2 | 2 | 44 | 90 | 103 | 62 | 30 | 12 | 2 | 0 | 0 | 0 | 0 | 350 |
| 1500 - 1600 | 1 | 0 | 0 | 1 | 5 | 22 | 108 | 133 | 64 | 19 | 6 | 1 | 0 | 0 | 0 | 360 |
| 1600 - 1700 | 0 | 1 | 0 | 0 | 2 | 10 | 78 | 139 | 108 | 41 | 9 | 0 | 0 | 0 | 0 | 388 |
| 1700 - 1800 | 2 | 0 | 0 | 0 | 3 | 14 | 84 | 132 | 110 | 47 | 8 | 2 | 0 | 0 | 0 | 402 |
| 1800 - 1900 | 0 | 0 | 0 | 2 | 1 | 11 | 72 | 108 | 91 | 32 | 10 | 0 | 0 | 0 | 0 | 327 |
| 1900 - 2000 | 0 | 0 | 0 | 0 | 2 | 8 | 34 | 93 | 104 | 45 | 10 | 2 | 0 | 0 | 0 | 298 |
| 2000 - 2100 | 1 | 0 | 0 | 0 | 1 | 10 | 55 | 102 | 101 | 38 | 6 | 2 | 0 | 0 | 0 | 316 |
| 2100 - 2200 | 0 | 0 | 0 | 0 | 0 | 2 | 15 | 41 | 52 | 34 | 5 | 0 | 0 | 0 | 0 | 149 |
| 2200 - 2300 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 16 | 18 | 4 | 2 | 0 | 2 | 1 | 62 |
| 2300 - 2400 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 9 | 9 | 2 | 2 | 1 | 0 | 0 | 28 |
| Session Total | 14 | 3 | 7 | 41 | 193 | 392 | 910 | 1427 | 1165 | 466 | 94 | 20 | 2 | 2 | 2 | 4738 |

| | |
|-----------------------|----|
| Average Speed | 47 |
| 85th Percentile Speed | 53 |

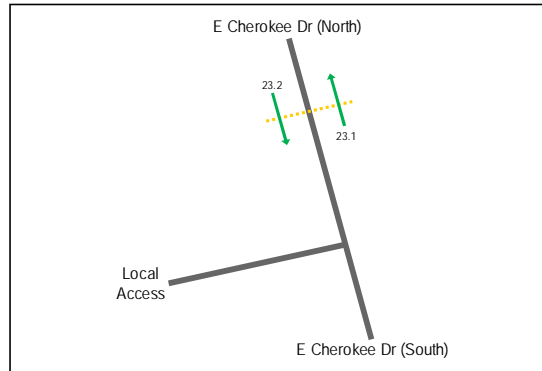
Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F



0000 - 2400 (Weekday 24h Session)

| TIME | Bi-Directional 60min | | | | | | | | | | | | | TOTAL |
|-------------|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Class 6 | Class 7 | Class 8 | Class 9 | Class 10 | Class 11 | Class 12 | Class 13 | |
| 0000 - 0100 | 0 | 13 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 0100 - 0200 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 0200 - 0300 | 0 | 2 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| 0300 - 0400 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 0400 - 0500 | 0 | 12 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 0500 - 0600 | 0 | 56 | 18 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 80 |
| 0600 - 0700 | 0 | 185 | 76 | 4 | 17 | 0 | 0 | 2 | 1 | 0 | 17 | 0 | 0 | 285 |
| 0700 - 0800 | 7 | 491 | 195 | 36 | 31 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 775 |
| 0800 - 0900 | 1 | 440 | 180 | 23 | 39 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 688 |
| 0900 - 1000 | 0 | 243 | 137 | 1 | 42 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 428 |
| 1000 - 1100 | 2 | 237 | 130 | 7 | 40 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 423 |
| 1100 - 1200 | 1 | 262 | 176 | 5 | 49 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 497 |
| 1200 - 1300 | 2 | 322 | 172 | 5 | 52 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 560 |
| 1300 - 1400 | 0 | 291 | 185 | 5 | 46 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 540 |
| 1400 - 1500 | 4 | 365 | 186 | 28 | 32 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 622 |
| 1500 - 1600 | 2 | 540 | 210 | 34 | 51 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 851 |
| 1600 - 1700 | 4 | 504 | 256 | 11 | 45 | 1 | 0 | 17 | 1 | 0 | 0 | 0 | 0 | 839 |
| 1700 - 1800 | 1 | 607 | 264 | 4 | 46 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 932 |
| 1800 - 1900 | 2 | 508 | 217 | 5 | 29 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 769 |
| 1900 - 2000 | 0 | 324 | 174 | 2 | 37 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 539 |
| 2000 - 2100 | 0 | 277 | 187 | 0 | 30 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 495 |
| 2100 - 2200 | 0 | 163 | 82 | 1 | 13 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 261 |
| 2200 - 2300 | 0 | 54 | 27 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 2300 - 2400 | 0 | 26 | 15 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |

| | | | | | | | | | | | | | | |
|--------------------|------|--------|--------|------|-------|------|------|------|------|------|------|------|------|--------|
| Session Total | 26 | 5939 | 2898 | 172 | 616 | 7 | 0 | 116 | 2 | 0 | 0 | 0 | 0 | 9776 |
| Session Average | 1.08 | 247.46 | 120.75 | 7.17 | 25.67 | 0.29 | 0.00 | 4.83 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 407.33 |
| Session Percentage | 0.27 | 60.75 | 29.64 | 1.76 | 6.30 | 0.07 | 0.00 | 1.19 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|-------------|---|---|---|---|-------------|
| AM Peak Hour | 0800 - 0900 | 0800 - 0900 | 0800 - 0900 | 0800 - 0900 | 1000 - 1100 | 0800 - 0900 | - | 0800 - 0900 | 0700 - 0800 | - | - | - | - | 0800 - 0900 |
| AM Peak Hour Volume | 7 | 491 | 195 | 36 | 42 | 1 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | 775 |

| | | | | | | | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|---|---|---|---|---|-------------|
| Noon Peak Hour | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1500 - 1600 | 1300 - 1400 | 1300 - 1400 | - | 1400 - 1500 | - | - | - | - | - | 1500 - 1600 |
| Noon Peak Hour Volume | 4 | 365 | 186 | 28 | 52 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 622 |

| | | | | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|-------------|---|---|---|---|-------------|
| PM Peak Hour | 1700 - 1800 | 1800 - 1900 | 1800 - 1900 | 1600 - 1700 | 1600 - 1700 | 1600 - 1700 | - | 1700 - 1800 | 1700 - 1800 | - | - | - | - | 1800 - 1900 |
| PM Peak Hour Volume | 4 | 607 | 264 | 34 | 51 | 1 | 0 | 17 | 1 | 0 | 0 | 0 | 0 | 932 |

Canton, GA
Classified Traffic Count

Site 23
E Cherokee Dr,
north of Local Access

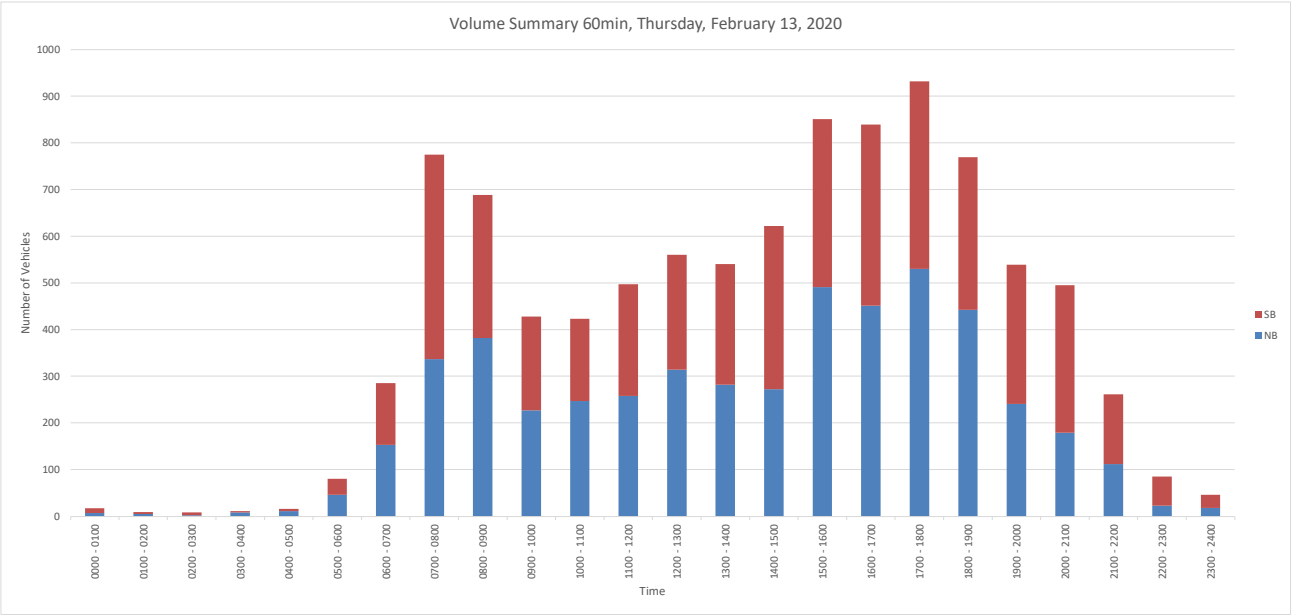
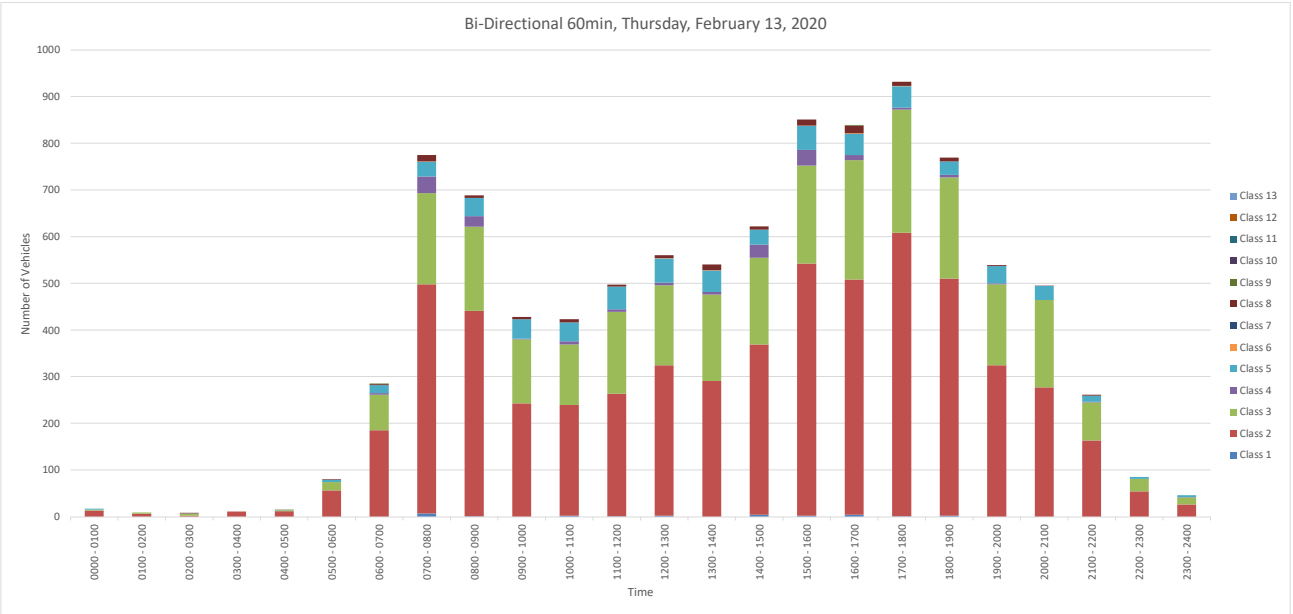
Lat/Long
34.248332°, -84.358661°

Date
Thursday, February 13, 2020

Weather
Mostly Cloudy
60°F

0000 - 2400 (Weekday 24h Session)

| Volume Summary 60min | | | |
|----------------------|--------|--------|--------|
| TIME | NB | SB | TOTAL |
| 0000 - 0100 | 7 | 10 | 17 |
| 0100 - 0200 | 5 | 4 | 9 |
| 0200 - 0300 | 2 | 6 | 8 |
| 0300 - 0400 | 8 | 3 | 11 |
| 0400 - 0500 | 11 | 5 | 16 |
| 0500 - 0600 | 46 | 34 | 80 |
| 0600 - 0700 | 153 | 132 | 285 |
| 0700 - 0800 | 337 | 438 | 775 |
| 0800 - 0900 | 382 | 306 | 688 |
| 0900 - 1000 | 227 | 201 | 428 |
| 1000 - 1100 | 247 | 176 | 423 |
| 1100 - 1200 | 258 | 239 | 497 |
| 1200 - 1300 | 314 | 246 | 560 |
| 1300 - 1400 | 282 | 258 | 540 |
| 1400 - 1500 | 272 | 350 | 622 |
| 1500 - 1600 | 491 | 360 | 851 |
| 1600 - 1700 | 451 | 388 | 839 |
| 1700 - 1800 | 530 | 402 | 932 |
| 1800 - 1900 | 442 | 327 | 769 |
| 1900 - 2000 | 241 | 298 | 539 |
| 2000 - 2100 | 179 | 316 | 495 |
| 2100 - 2200 | 112 | 149 | 261 |
| 2200 - 2300 | 23 | 62 | 85 |
| 2300 - 2400 | 18 | 28 | 46 |
| Session Total | 5038 | 4738 | 9776 |
| Session Average | 209.92 | 197.42 | 407.33 |
| Session Percentage | 51.53 | 48.47 | |



Appendix B: Capacity Analysis and Signal Timings



Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 336 | 439 | 200 | 627 | 85 | 189 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 336 | 439 | 200 | 627 | 85 | 189 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 35.0 | 58.0 | 58.0 | 30.0 | 53.0 | 53.0 | 25.0 | 37.0 | 25.0 | 37.0 | 37.0 |
| Total Split (%) | 23.3% | 38.7% | 38.7% | 20.0% | 35.3% | 35.3% | 16.7% | 24.7% | 16.7% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 53.9 | 41.9 | 41.9 | 64.1 | 47.0 | 47.0 | 47.2 | 30.8 | 53.0 | 34.7 | 34.7 |
| Actuated g/C Ratio | 0.40 | 0.31 | 0.31 | 0.48 | 0.35 | 0.35 | 0.35 | 0.23 | 0.40 | 0.26 | 0.26 |
| v/c Ratio | 0.58 | 0.61 | 0.57 | 0.57 | 1.15 | 0.16 | 0.43 | 0.34 | 0.22 | 0.31 | 0.34 |
| Control Delay | 36.0 | 44.8 | 6.1 | 25.8 | 124.5 | 4.7 | 29.5 | 40.3 | 26.5 | 44.2 | 7.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 36.0 | 44.8 | 6.1 | 25.8 | 124.5 | 4.7 | 29.5 | 40.3 | 26.5 | 44.2 | 7.8 |
| LOS | D | D | A | C | F | A | C | D | C | D | A |
| Approach Delay | | 24.5 | | | 91.7 | | | 33.8 | | 24.7 | |
| Approach LOS | | C | | | F | | | C | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 133.5

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 51.9

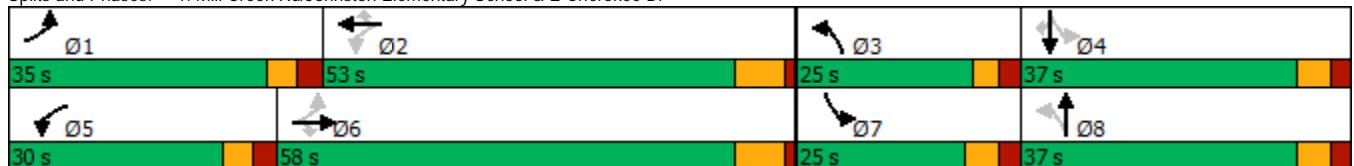
Intersection LOS: D

Intersection Capacity Utilization 76.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 336 | 439 | 200 | 627 | 85 | 189 | 75 | 48 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 336 | 439 | 200 | 627 | 85 | 189 | 75 | 48 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 354 | 462 | 241 | 755 | 102 | 212 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 162 | 597 | 506 | 353 | 687 | 583 | 462 | 432 | | 558 | 502 | 426 |
| Arrive On Green | 0.06 | 0.32 | 0.32 | 0.11 | 0.37 | 0.37 | 0.11 | 0.23 | 0.00 | 0.14 | 0.28 | 0.28 |
| Sat Flow, veh/h | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 354 | 462 | 241 | 755 | 102 | 212 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 5.8 | 21.0 | 37.1 | 11.5 | 48.3 | 5.7 | 11.9 | 4.8 | 0.0 | 5.4 | 8.4 | 12.7 |
| Cycle Q Clear(g_c), s | 5.8 | 21.0 | 37.1 | 11.5 | 48.3 | 5.7 | 11.9 | 4.8 | 0.0 | 5.4 | 8.4 | 12.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 162 | 597 | 506 | 353 | 687 | 583 | 462 | 432 | | 558 | 502 | 426 |
| V/C Ratio(X) | 0.73 | 0.59 | 0.91 | 0.68 | 1.10 | 0.18 | 0.46 | 0.19 | | 0.20 | 0.29 | 0.43 |
| Avail Cap(c_a), veh/h | 442 | 722 | 612 | 486 | 687 | 583 | 533 | 432 | | 558 | 502 | 426 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 33.6 | 37.3 | 42.8 | 26.7 | 41.5 | 28.1 | 32.4 | 40.3 | 0.0 | 26.5 | 37.5 | 39.1 |
| Incr Delay (d2), s/veh | 6.1 | 0.9 | 16.2 | 2.3 | 64.3 | 0.1 | 0.7 | 1.0 | 0.0 | 0.8 | 1.5 | 3.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 9.7 | 16.4 | 5.1 | 34.2 | 2.2 | 5.1 | 2.3 | 0.0 | 2.4 | 4.0 | 5.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.8 | 38.3 | 59.0 | 29.1 | 105.9 | 28.2 | 33.1 | 41.3 | 0.0 | 27.3 | 39.0 | 42.2 |
| LnGrp LOS | D | D | E | C | F | C | C | D | | C | D | D |
| Approach Vol, veh/h | | 934 | | | 1098 | | | 296 | A | | 440 | |
| Approach Delay, s/veh | | 48.7 | | | 81.8 | | | 35.4 | | | 37.4 | |
| Approach LOS | | D | | | F | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.2 | 55.2 | 19.7 | 42.3 | 20.2 | 49.2 | 25.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 29 | 46.1 | 19.5 | * 31 | * 24 | 51.1 | * 19 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.8 | 50.3 | 13.9 | 14.7 | 13.5 | 39.1 | 7.4 | 6.8 | | | | |
| Green Ext Time (p_c), s | 0.3 | 0.0 | 0.3 | 1.3 | 0.5 | 3.2 | 0.2 | 0.4 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 58.6 | | | | | | | | | | | |
| HCM 6th LOS | E | | | | | | | | | | | |

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 11 | 470 | 871 | 4 | 6 | 37 |
| Future Vol, veh/h | 11 | 470 | 871 | 4 | 6 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 82 | 82 | 83 | 83 |
| Heavy Vehicles, % | 5 | 5 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 12 | 505 | 1062 | 5 | 7 | 45 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1067 | 0 | - | 0 | 1594 | 1065 |
| Stage 1 | - | - | - | - | 1065 | - |
| Stage 2 | - | - | - | - | 529 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | 642 | - | - | - | 114 | 264 |
| Stage 1 | - | - | - | - | 324 | - |
| Stage 2 | - | - | - | - | 581 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 642 | - | - | - | 111 | 264 |
| Mov Cap-2 Maneuver | - | - | - | - | 111 | - |
| Stage 1 | - | - | - | - | 316 | - |
| Stage 2 | - | - | - | - | 581 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 26.2 | | |
| HCM LOS | | | | D | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 642 | - | - | - | 221 | |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.234 | |
| HCM Control Delay (s) | 10.7 | 0 | - | - | 26.2 | |
| HCM Lane LOS | B | A | - | - | D | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.9 | |

HCM 6th TWSC
 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 431 | 6 | 1 | 582 | 11 | 13 | 0 | 11 | 30 | 1 | 52 |
| Future Vol, veh/h | 15 | 431 | 6 | 1 | 582 | 11 | 13 | 0 | 11 | 30 | 1 | 52 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 91 | 91 | 91 | 75 | 75 | 75 | 74 | 74 | 74 |
| Heavy Vehicles, % | 6 | 6 | 6 | 2 | 2 | 2 | 8 | 8 | 8 | 1 | 1 | 1 |
| Mvmt Flow | 16 | 449 | 6 | 1 | 640 | 12 | 17 | 0 | 15 | 41 | 1 | 70 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 652 | 0 | 0 | 455 | 0 | 0 | 1165 | 1135 | 449 | 1140 | 1135 | 646 |
| Stage 1 | - | - | - | - | - | - | 481 | 481 | - | 648 | 648 | - |
| Stage 2 | - | - | - | - | - | - | 684 | 654 | - | 492 | 487 | - |
| Critical Hdwy | 4.16 | - | - | 4.12 | - | - | 7.18 | 6.58 | 6.28 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.254 | - | - | 2.218 | - | - | 3.572 | 4.072 | 3.372 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 916 | - | - | 1106 | - | - | 166 | 197 | 598 | 179 | 203 | 473 |
| Stage 1 | - | - | - | - | - | - | 555 | 544 | - | 461 | 468 | - |
| Stage 2 | - | - | - | - | - | - | 429 | 454 | - | 560 | 552 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 916 | - | - | 1106 | - | - | 138 | 192 | 598 | 171 | 198 | 473 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 138 | 192 | - | 171 | 198 | - |
| Stage 1 | - | - | - | - | - | - | 542 | 531 | - | 450 | 468 | - |
| Stage 2 | - | - | - | - | - | - | 364 | 454 | - | 534 | 539 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.3 | 0 | 24.9 | 25.5 |
| HCM LOS | | | C | D |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 213 | 916 | - | - | 1106 | - | - | 286 |
| HCM Lane V/C Ratio | 0.15 | 0.017 | - | - | 0.001 | - | - | 0.392 |
| HCM Control Delay (s) | 24.9 | 9 | 0 | - | 8.3 | 0 | - | 25.5 |
| HCM Lane LOS | C | A | A | - | A | A | - | D |
| HCM 95th %tile Q(veh) | 0.5 | 0.1 | - | - | 0 | - | - | 1.8 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 11.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 17 | 448 | 535 | 35 | 147 | 44 |
| Future Vol, veh/h | 17 | 448 | 535 | 35 | 147 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 90 | 90 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 18 | 477 | 594 | 39 | 169 | 51 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 633 | 0 | - | 0 | 1127 | 614 |
| Stage 1 | - | - | - | - | 614 | - |
| Stage 2 | - | - | - | - | 513 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 936 | - | - | - | 225 | 490 |
| Stage 1 | - | - | - | - | 538 | - |
| Stage 2 | - | - | - | - | 599 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 936 | - | - | - | 219 | 490 |
| Mov Cap-2 Maneuver | - | - | - | - | 219 | - |
| Stage 1 | - | - | - | - | 524 | - |
| Stage 2 | - | - | - | - | 599 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.3 | 0 | | 71.4 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 936 | - | - | - | 251 | |
| HCM Lane V/C Ratio | 0.019 | - | - | - | 0.875 | |
| HCM Control Delay (s) | 8.9 | 0 | - | - | 71.4 | |
| HCM Lane LOS | A | A | - | - | F | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 7.3 | |

HCM 6th TWSC
5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 585 | 10 | 6 | 540 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Future Vol, veh/h | 2 | 585 | 10 | 6 | 540 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 89 | 89 | 89 | 73 | 73 | 73 | 58 | 58 | 58 |
| Heavy Vehicles, % | 4 | 4 | 4 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 2 | 622 | 11 | 7 | 607 | 6 | 25 | 0 | 32 | 9 | 0 | 28 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 613 | 0 | 0 | 633 | 0 | 0 | 1270 | 628 | 1272 | 1261 | 610 | |
| Stage 1 | - | - | - | - | - | - | 632 | 632 | - | 624 | 624 | - |
| Stage 2 | - | - | - | - | - | - | 638 | 627 | - | 648 | 637 | - |
| Critical Hdwy | 4.14 | - | - | 4.11 | - | - | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.209 | - | - | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 |
| Pot Cap-1 Maneuver | 957 | - | - | 955 | - | - | 143 | 168 | 477 | 142 | 168 | 489 |
| Stage 1 | - | - | - | - | - | - | 463 | 469 | - | 468 | 473 | - |
| Stage 2 | - | - | - | - | - | - | 460 | 472 | - | 454 | 467 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 957 | - | - | 955 | - | - | 134 | 166 | 477 | 131 | 166 | 489 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 134 | 166 | - | 131 | 166 | - |
| Stage 1 | - | - | - | - | - | - | 462 | 468 | - | 467 | 468 | - |
| Stage 2 | - | - | - | - | - | - | 429 | 467 | - | 423 | 466 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 0.1 | 26.2 | 18.9 |
| HCM LOS | | | D | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 225 | 957 | - | - | 955 | - | - | 296 |
| HCM Lane V/C Ratio | 0.25 | 0.002 | - | - | 0.007 | - | - | 0.122 |
| HCM Control Delay (s) | 26.2 | 8.8 | 0 | - | 8.8 | 0 | - | 18.9 |
| HCM Lane LOS | D | A | A | - | A | A | - | C |
| HCM 95th %tile Q(veh) | 1 | 0 | - | - | 0 | - | - | 0.4 |

HCM 6th TWSC

6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 501 | 569 | 16 | 56 | 44 |
| Future Vol, veh/h | 13 | 501 | 569 | 16 | 56 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 89 | 87 | 68 | 68 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 545 | 639 | 18 | 82 | 65 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 657 | 0 | - | 0 | 1212 | 639 |
| Stage 1 | - | - | - | - | 639 | - |
| Stage 2 | - | - | - | - | 573 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.236 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 921 | - | - | - | 201 | 476 |
| Stage 1 | - | - | - | - | 526 | - |
| Stage 2 | - | - | - | - | 564 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 921 | - | - | - | 197 | 476 |
| Mov Cap-2 Maneuver | - | - | - | - | 197 | - |
| Stage 1 | - | - | - | - | 514 | - |
| Stage 2 | - | - | - | - | 564 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 34.3 | | |
| HCM LOS | | | | D | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 921 | - | - | - | 265 | |
| HCM Lane V/C Ratio | 0.015 | - | - | - | 0.555 | |
| HCM Control Delay (s) | 9 | 0 | - | - | 34.3 | |
| HCM Lane LOS | A | A | - | - | D | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 3.1 | |

HCM 6th TWSC
7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 545 | 9 | 2 | 564 | 19 | 9 |
| Future Vol, veh/h | 545 | 9 | 2 | 564 | 19 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 83 | 83 | 64 | 64 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 599 | 10 | 2 | 680 | 30 | 14 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 609 | 0 | 1283 | 599 |
| Stage 1 | - | - | - | - | 599 | - |
| Stage 2 | - | - | - | - | 684 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | - | - | 970 | - | 178 | 492 |
| Stage 1 | - | - | - | - | 539 | - |
| Stage 2 | - | - | - | - | 492 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 970 | - | 177 | 492 |
| Mov Cap-2 Maneuver | - | - | - | - | 177 | - |
| Stage 1 | - | - | - | - | 539 | - |
| Stage 2 | - | - | - | - | 491 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0 | 25 | | | |
| HCM LOS | | | | | | D |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 223 | - | - | 970 | - | |
| HCM Lane V/C Ratio | 0.196 | - | - | 0.002 | - | |
| HCM Control Delay (s) | 25 | - | - | 8.7 | 0 | |
| HCM Lane LOS | D | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 537 | 516 | 7 | 35 | 42 |
| Future Vol, veh/h | 11 | 537 | 516 | 7 | 35 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 91 | 91 | 81 | 81 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 12 | 584 | 567 | 8 | 43 | 52 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 575 | 0 | - | 0 | 1175 | 567 |
| Stage 1 | - | - | - | - | 567 | - |
| Stage 2 | - | - | - | - | 608 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 983 | - | - | - | 211 | 521 |
| Stage 1 | - | - | - | - | 566 | - |
| Stage 2 | - | - | - | - | 541 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 983 | - | - | - | 207 | 521 |
| Mov Cap-2 Maneuver | - | - | - | - | 207 | - |
| Stage 1 | - | - | - | - | 556 | - |
| Stage 2 | - | - | - | - | 541 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 21.8 | | |
| HCM LOS | | | | C | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 983 | - | - | - | 308 | |
| HCM Lane V/C Ratio | 0.012 | - | - | - | 0.309 | |
| HCM Control Delay (s) | 8.7 | 0 | - | - | 21.8 | |
| HCM Lane LOS | A | A | - | - | C | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 1.3 | |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 28 | 610 | 3 | 4 | 506 | 7 | 2 | 0 | 5 | 4 | 0 | 84 |
| Future Vol, veh/h | 28 | 610 | 3 | 4 | 506 | 7 | 2 | 0 | 5 | 4 | 0 | 84 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 95 | 95 | 95 | 44 | 44 | 44 | 73 | 73 | 73 |
| Heavy Vehicles, % | 4 | 4 | 4 | 2 | 2 | 2 | 14 | 14 | 14 | 1 | 1 | 1 |
| Mvmt Flow | 33 | 709 | 3 | 4 | 533 | 7 | 5 | 0 | 11 | 5 | 0 | 115 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 540 | 0 | 0 | 712 | 0 | 0 | 1379 | 1325 | 711 | 1327 | 1323 | 537 |
| Stage 1 | - | - | - | - | - | - | 777 | 777 | - | 545 | 545 | - |
| Stage 2 | - | - | - | - | - | - | 602 | 548 | - | 782 | 778 | - |
| Critical Hdwy | 4.14 | - | - | 4.12 | - | - | 7.24 | 6.64 | 6.34 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.218 | - | - | 3.626 | 4.126 | 3.426 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 1018 | - | - | 888 | - | - | 115 | 147 | 413 | 133 | 157 | 546 |
| Stage 1 | - | - | - | - | - | - | 372 | 390 | - | 524 | 520 | - |
| Stage 2 | - | - | - | - | - | - | 466 | 498 | - | 389 | 408 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1018 | - | - | 888 | - | - | 87 | 138 | 413 | 123 | 148 | 546 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 87 | 138 | - | 123 | 148 | - |
| Stage 1 | - | - | - | - | - | - | 352 | 369 | - | 496 | 517 | - |
| Stage 2 | - | - | - | - | - | - | 366 | 495 | - | 358 | 386 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.4 | 0.1 | 24.7 | 15.2 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 199 | 1018 | - | - | 888 | - | - | 472 |
| HCM Lane V/C Ratio | 0.08 | 0.032 | - | - | 0.005 | - | - | 0.255 |
| HCM Control Delay (s) | 24.7 | 8.7 | 0 | - | 9.1 | 0 | - | 15.2 |
| HCM Lane LOS | C | A | A | - | A | A | - | C |
| HCM 95th %tile Q(veh) | 0.3 | 0.1 | - | - | 0 | - | - | 1 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 257 | 499 | 131 | 254 | 94 | 114 | 248 | 192 | 116 | 333 | 268 |
| Future Volume (vph) | 257 | 499 | 131 | 254 | 94 | 114 | 248 | 192 | 116 | 333 | 268 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 69.2 | 55.2 | 66.8 | 54.0 | 54.0 | 55.7 | 43.6 | 43.6 | 56.5 | 44.0 | 44.0 |
| Actuated g/C Ratio | 0.47 | 0.37 | 0.45 | 0.36 | 0.36 | 0.38 | 0.29 | 0.29 | 0.38 | 0.30 | 0.30 |
| v/c Ratio | 0.62 | 0.87 | 0.69 | 0.45 | 0.18 | 0.44 | 0.50 | 0.35 | 0.35 | 0.69 | 0.45 |
| Control Delay | 30.5 | 57.9 | 40.9 | 39.0 | 6.1 | 32.0 | 47.6 | 6.5 | 29.8 | 54.1 | 6.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.5 | 57.9 | 40.9 | 39.0 | 6.1 | 32.0 | 47.6 | 6.5 | 29.8 | 54.1 | 6.2 |
| LOS | C | E | D | D | A | C | D | A | C | D | A |
| Approach Delay | | 49.0 | | 33.0 | | | 30.2 | | | 32.2 | |
| Approach LOS | | D | | C | | | C | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 148.1 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.87 | |
| Intersection Signal Delay: 37.1 | Intersection LOS: D |
| Intersection Capacity Utilization 79.4% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd

| | | | |
|------------|------------|------------|------------|
| Ø1 20 s | Ø2 60 s | Ø3 30 s | Ø4 50 s |
| Ø5 20 s | Ø6 60 s | Ø7 30 s | Ø8 50 s |

HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 257 | 499 | 33 | 131 | 254 | 94 | 114 | 248 | 192 | 116 | 333 | 268 |
| Future Volume (veh/h) | 257 | 499 | 33 | 131 | 254 | 94 | 114 | 248 | 192 | 116 | 333 | 268 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 292 | 567 | 0 | 154 | 299 | 0 | 125 | 273 | 211 | 135 | 387 | 312 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.91 | 0.91 | 0.91 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 3 | 1 | 1 | 1 |
| Cap, veh/h | 494 | 753 | | 286 | 679 | | 253 | 556 | 471 | 334 | 571 | 484 |
| Arrive On Green | 0.10 | 0.40 | 0.00 | 0.07 | 0.37 | 0.00 | 0.06 | 0.30 | 0.30 | 0.07 | 0.30 | 0.30 |
| Sat Flow, veh/h | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 292 | 567 | 0 | 154 | 299 | 0 | 125 | 273 | 211 | 135 | 387 | 312 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 14.0 | 37.5 | 0.0 | 7.9 | 17.9 | 0.0 | 7.0 | 17.5 | 15.8 | 7.5 | 26.2 | 24.6 |
| Cycle Q Clear(g_c), s | 14.0 | 37.5 | 0.0 | 7.9 | 17.9 | 0.0 | 7.0 | 17.5 | 15.8 | 7.5 | 26.2 | 24.6 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 494 | 753 | | 286 | 679 | | 253 | 556 | 471 | 334 | 571 | 484 |
| V/C Ratio(X) | 0.59 | 0.75 | | 0.54 | 0.44 | | 0.49 | 0.49 | 0.45 | 0.40 | 0.68 | 0.64 |
| Avail Cap(c_a), veh/h | 494 | 753 | | 333 | 679 | | 433 | 562 | 476 | 511 | 571 | 484 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 26.9 | 37.5 | 0.0 | 29.7 | 34.3 | 0.0 | 34.4 | 41.8 | 41.1 | 32.8 | 44.4 | 43.8 |
| Incr Delay (d2), s/veh | 1.9 | 6.9 | 0.0 | 1.6 | 2.1 | 0.0 | 1.5 | 1.4 | 1.4 | 0.8 | 6.3 | 6.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.7 | 18.7 | 0.0 | 3.4 | 8.4 | 0.0 | 3.2 | 8.3 | 6.4 | 3.4 | 13.3 | 10.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.8 | 44.4 | 0.0 | 31.3 | 36.3 | 0.0 | 35.9 | 43.2 | 42.6 | 33.5 | 50.7 | 50.3 |
| LnGrp LOS | C | D | | C | D | | D | D | D | C | D | D |
| Approach Vol, veh/h | | 859 | A | | 453 | A | | 609 | | | 834 | |
| Approach Delay, s/veh | | 39.1 | | | 34.6 | | | 41.5 | | | 47.8 | |
| Approach LOS | | D | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 15.2 | 50.0 | 16.0 | 64.0 | 15.7 | 49.5 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.0 | 19.9 | 9.0 | 28.2 | 9.9 | 39.5 | 9.5 | 19.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.8 | 0.3 | 6.0 | 0.1 | 5.5 | 0.3 | 4.9 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 41.5 | | | | | | | | | | | |
| HCM 6th LOS | D | | | | | | | | | | | |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 102 | 87 | 23 | 159 | 372 | 63 |
| Future Vol, veh/h | 102 | 87 | 23 | 159 | 372 | 63 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 71 | 71 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 8 | 8 |
| Mvmt Flow | 112 | 96 | 32 | 224 | 409 | 69 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 732 | 444 | 478 | 0 | 0 |
| Stage 1 | 444 | - | - | - | - |
| Stage 2 | 288 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.19 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.281 | - | - |
| Pot Cap-1 Maneuver | 390 | 616 | 1049 | - | - |
| Stage 1 | 649 | - | - | - | - |
| Stage 2 | 763 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 376 | 616 | 1049 | - | - |
| Mov Cap-2 Maneuver | 376 | - | - | - | - |
| Stage 1 | 626 | - | - | - | - |
| Stage 2 | 763 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.3 | 1.1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1049 | - | 697 | - | - |
| HCM Lane V/C Ratio | 0.031 | - | 0.298 | - | - |
| HCM Control Delay (s) | 8.5 | 0 | 12.3 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 1.2 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 10 | 244 | 412 | 0 | 1 | 38 |
| Future Vol, veh/h | 10 | 244 | 412 | 0 | 1 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 94 | 94 | 75 | 75 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 12 | 290 | 438 | 0 | 1 | 51 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 438 | 0 | 0 | 752 | 438 |
| Stage 1 | - | - | - | 438 | - |
| Stage 2 | - | - | - | 314 | - |
| Critical Hdwy | 4.12 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.218 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1122 | - | - | 377 | 617 |
| Stage 1 | - | - | - | 648 | - |
| Stage 2 | - | - | - | 738 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1122 | - | - | 372 | 617 |
| Mov Cap-2 Maneuver | - | - | - | 372 | - |
| Stage 1 | - | - | - | 640 | - |
| Stage 2 | - | - | - | 738 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 11.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1122 | - | - | - | 607 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.086 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 11.5 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.3 |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 153 | 0 | 0 | 0 | 0 | 3 | 0 | 250 | 4 | 1 | 403 | 109 |
| Future Vol, veh/h | 153 | 0 | 0 | 0 | 0 | 3 | 0 | 250 | 4 | 1 | 403 | 109 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 75 | 75 | 75 | 77 | 77 | 77 | 95 | 95 | 95 |
| Heavy Vehicles, % | 4 | 4 | 4 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 |
| Mvmt Flow | 168 | 0 | 0 | 0 | 0 | 4 | 0 | 325 | 5 | 1 | 424 | 115 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-----|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 814 | 814 | 482 | 812 | 869 | 328 | 539 | 0 | 0 | 330 | 0 | 0 |
| Stage 1 | 484 | 484 | - | 328 | 328 | - | - | - | - | - | - | - |
| Stage 2 | 330 | 330 | - | 484 | 541 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.14 | 6.54 | 6.24 | 7.1 | 6.5 | 6.2 | 4.13 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.036 | 3.336 | 3.5 | 4 | 3.3 | 2.227 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 294 | 310 | 580 | 300 | 292 | 718 | 1024 | - | - | 1229 | - | - |
| Stage 1 | 560 | 549 | - | 689 | 651 | - | - | - | - | - | - | - |
| Stage 2 | 679 | 642 | - | 568 | 524 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 292 | 310 | 580 | 300 | 292 | 718 | 1024 | - | - | 1229 | - | - |
| Mov Cap-2 Maneuver | 292 | 310 | - | 300 | 292 | - | - | - | - | - | - | - |
| Stage 1 | 560 | 548 | - | 689 | 651 | - | - | - | - | - | - | - |
| Stage 2 | 675 | 642 | - | 567 | 523 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|------|--|--|----|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 32.8 | | | 10 | | | 0 | | | 0 | | |
| HCM LOS | D | | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1024 | - | - | 292 | 718 | 1229 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.576 | 0.006 | 0.001 | - | - |
| HCM Control Delay (s) | 0 | - | - | 32.8 | 10 | 7.9 | 0 | - |
| HCM Lane LOS | A | - | - | D | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 3.3 | 0 | 0 | - | - |

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020

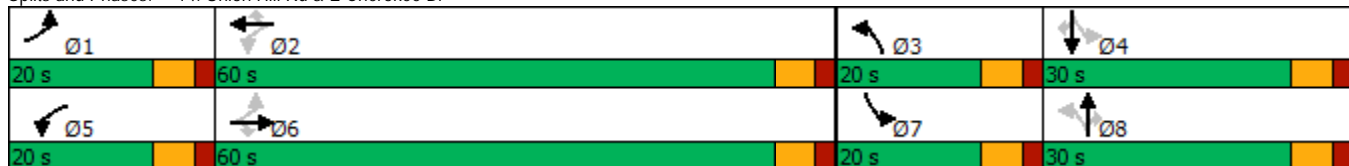


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 47 | 304 | 83 | 93 | 378 | 139 | 37 | 71 | 87 | 165 | 139 | 64 |
| Future Volume (vph) | 47 | 304 | 83 | 93 | 378 | 139 | 37 | 71 | 87 | 165 | 139 | 64 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 61.1 | 54.2 | 54.2 | 66.3 | 58.8 | 58.8 | 21.0 | 12.9 | 12.9 | 32.0 | 21.2 | 21.2 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.58 | 0.52 | 0.52 | 0.18 | 0.11 | 0.11 | 0.28 | 0.19 | 0.19 |
| v/c Ratio | 0.12 | 0.40 | 0.12 | 0.21 | 0.49 | 0.20 | 0.21 | 0.51 | 0.44 | 0.66 | 0.57 | 0.22 |
| Control Delay | 11.1 | 22.3 | 1.9 | 11.3 | 22.2 | 4.3 | 32.4 | 56.1 | 12.6 | 44.3 | 51.6 | 3.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.1 | 22.3 | 1.9 | 11.3 | 22.2 | 4.3 | 32.4 | 56.1 | 12.6 | 44.3 | 51.6 | 3.5 |
| LOS | B | C | A | B | C | A | C | E | B | D | D | A |
| Approach Delay | | 17.2 | | | 16.4 | | | 32.2 | | | 40.0 | |
| Approach LOS | | B | | | B | | | C | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 114 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.66 | |
| Intersection Signal Delay: 24.6 | Intersection LOS: C |
| Intersection Capacity Utilization 59.0% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 47 | 304 | 83 | 93 | 378 | 139 | 37 | 71 | 87 | 165 | 139 | 64 |
| Future Volume (veh/h) | 47 | 304 | 83 | 93 | 378 | 139 | 37 | 71 | 87 | 165 | 139 | 64 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 | 1885 | 1885 | 1885 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h | 53 | 345 | 0 | 113 | 461 | 0 | 56 | 108 | 0 | 220 | 185 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.82 | 0.82 | 0.82 | 0.66 | 0.66 | 0.66 | 0.75 | 0.75 | 0.75 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 1 | 8 | 8 | 8 |
| Cap, veh/h | 462 | 943 | | 558 | 970 | | 230 | 148 | | 321 | 307 | |
| Arrive On Green | 0.03 | 0.51 | 0.00 | 0.05 | 0.53 | 0.00 | 0.04 | 0.08 | 0.00 | 0.13 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Grp Volume(v), veh/h | 53 | 345 | 0 | 113 | 461 | 0 | 56 | 108 | 0 | 220 | 185 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Q Serve(g_s), s | 1.5 | 11.9 | 0.0 | 3.2 | 16.7 | 0.0 | 3.0 | 5.9 | 0.0 | 12.1 | 10.1 | 0.0 |
| Cycle Q Clear(g_c), s | 1.5 | 11.9 | 0.0 | 3.2 | 16.7 | 0.0 | 3.0 | 5.9 | 0.0 | 12.1 | 10.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 462 | 943 | | 558 | 970 | | 230 | 148 | | 321 | 307 | |
| V/C Ratio(X) | 0.11 | 0.37 | | 0.20 | 0.48 | | 0.24 | 0.73 | | 0.69 | 0.60 | |
| Avail Cap(c_a), veh/h | 643 | 943 | | 703 | 970 | | 399 | 429 | | 321 | 405 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 12.5 | 15.4 | 0.0 | 11.6 | 15.5 | 0.0 | 42.4 | 47.5 | 0.0 | 36.3 | 40.3 | 0.0 |
| Incr Delay (d2), s/veh | 0.1 | 1.1 | 0.0 | 0.2 | 1.7 | 0.0 | 0.5 | 6.8 | 0.0 | 5.9 | 1.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 4.8 | 0.0 | 1.1 | 6.7 | 0.0 | 1.3 | 3.0 | 0.0 | 5.3 | 4.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.6 | 16.5 | 0.0 | 11.8 | 17.2 | 0.0 | 43.0 | 54.2 | 0.0 | 42.2 | 42.2 | 0.0 |
| LnGrp LOS | B | B | | B | B | | D | D | | D | D | |
| Approach Vol, veh/h | | 398 | A | | 574 | A | | 164 | A | | 405 | A |
| Approach Delay, s/veh | | 16.0 | | | 16.1 | | | 50.4 | | | 42.2 | |
| Approach LOS | | B | | | B | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 62.0 | 10.1 | 24.2 | 11.2 | 60.0 | 20.0 | 14.3 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 18.7 | 5.0 | 12.1 | 5.2 | 13.9 | 14.1 | 7.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.8 | 0.1 | 0.6 | 0.1 | 2.0 | 0.0 | 0.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 26.6 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 12 | 7 | 435 | 425 | 1 |
| Future Vol, veh/h | 6 | 12 | 7 | 435 | 425 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 50 | 50 | 77 | 77 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 12 | 24 | 9 | 565 | 500 | 1 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1084 | 501 | 501 | 0 | 0 |
| Stage 1 | 501 | - | - | - | - |
| Stage 2 | 583 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 242 | 574 | 1053 | - | - |
| Stage 1 | 613 | - | - | - | - |
| Stage 2 | 562 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 239 | 574 | 1053 | - | - |
| Mov Cap-2 Maneuver | 239 | - | - | - | - |
| Stage 1 | 606 | - | - | - | - |
| Stage 2 | 562 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1053 | - | 391 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.092 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 15.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.3 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↔ | | ↕ | | ↔ | |
| Traffic Vol, veh/h | 37 | 4 | 7 | 450 | 400 | 30 |
| Future Vol, veh/h | 37 | 4 | 7 | 450 | 400 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 73 | 73 | 80 | 80 | 87 | 87 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 51 | 5 | 9 | 563 | 460 | 34 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1058 | 477 | 494 | 0 | 0 |
| Stage 1 | 477 | - | - | - | - |
| Stage 2 | 581 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 249 | 588 | 1059 | - | - |
| Stage 1 | 624 | - | - | - | - |
| Stage 2 | 559 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 246 | 588 | 1059 | - | - |
| Mov Cap-2 Maneuver | 246 | - | - | - | - |
| Stage 1 | 617 | - | - | - | - |
| Stage 2 | 559 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.5 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1059 | - | 261 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | 0.215 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 22.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.8 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 471 | 17 | 3 | 410 | 16 | 2 |
| Future Vol, veh/h | 471 | 17 | 3 | 410 | 16 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 84 | 84 | 86 | 86 | 64 | 64 |
| Heavy Vehicles, % | 3 | 3 | 6 | 6 | 0 | 0 |
| Mvmt Flow | 561 | 20 | 3 | 477 | 25 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|----------------------|--------|---|--------|---|--------|-----|
| Conflicting Flow All | 0 | 0 | 581 | 0 | 1054 | 571 |
| Stage 1 | - | - | - | - | 571 | - |
| Stage 2 | - | - | - | - | 483 | - |
| Critical Hdwy | - | - | 4.16 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.254 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 974 | - | 252 | 524 |
| Stage 1 | - | - | - | - | 569 | - |
| Stage 2 | - | - | - | - | 625 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 974 | - | 251 | 524 |
| Mov Cap-2 Maneuver | - | - | - | - | 251 | - |
| Stage 1 | - | - | - | - | 569 | - |
| Stage 2 | - | - | - | - | 623 | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 20.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 266 | - | - | 974 | - |
| HCM Lane V/C Ratio | 0.106 | - | - | 0.004 | - |
| HCM Control Delay (s) | 20.1 | - | - | 8.7 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 54 | 2 | 405 | 522 | 2 |
| Future Vol, veh/h | 3 | 54 | 2 | 405 | 522 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 65 | 65 | 93 | 93 | 77 | 77 |
| Heavy Vehicles, % | 5 | 5 | 4 | 4 | 3 | 3 |
| Mvmt Flow | 5 | 83 | 2 | 435 | 678 | 3 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1119 | 680 | 681 | 0 | 0 |
| Stage 1 | 680 | - | - | - | - |
| Stage 2 | 439 | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 226 | 446 | 902 | - | - |
| Stage 1 | 498 | - | - | - | - |
| Stage 2 | 644 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 225 | 446 | 902 | - | - |
| Mov Cap-2 Maneuver | 225 | - | - | - | - |
| Stage 1 | 497 | - | - | - | - |
| Stage 2 | 644 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 15.7 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 902 | - | 424 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | 0.207 | - | - |
| HCM Control Delay (s) | 9 | 0 | 15.7 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.8 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 20.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 148 | 117 | 254 | 183 | 115 | 334 |
| Future Vol, veh/h | 148 | 117 | 254 | 183 | 115 | 334 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 61 | 61 | 86 | 86 | 84 | 84 |
| Heavy Vehicles, % | 0 | 0 | 3 | 3 | 1 | 1 |
| Mvmt Flow | 243 | 192 | 295 | 213 | 137 | 398 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 967 | 295 | 0 | 0 | 508 |
| Stage 1 | 295 | - | - | - | - |
| Stage 2 | 672 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.11 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.209 |
| Pot Cap-1 Maneuver | 284 | 749 | - | - | 1062 |
| Stage 1 | 760 | - | - | - | - |
| Stage 2 | 511 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | ~ 237 | 749 | - | - | 1062 |
| Mov Cap-2 Maneuver | ~ 237 | - | - | - | - |
| Stage 1 | 760 | - | - | - | - |
| Stage 2 | 426 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 66.2 | 0 | 2.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 237 | 749 | 1062 | - |
| HCM Lane V/C Ratio | - | - | 1.024 | 0.256 | 0.129 | - |
| HCM Control Delay (s) | - | - | 109.4 | 11.5 | 8.9 | 0 |
| HCM Lane LOS | - | - | F | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 9.9 | 1 | 0.4 | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020

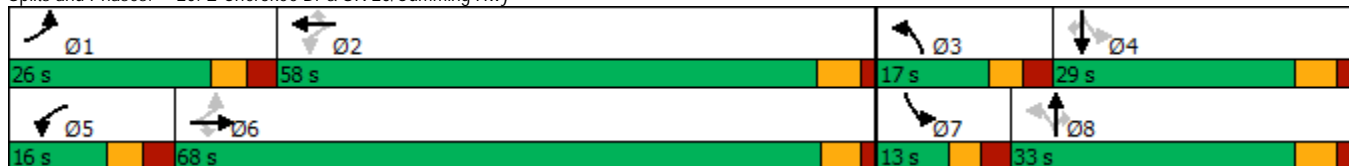


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 480 | 119 | 79 | 491 | 68 | 141 | 134 | 124 | 90 | 178 | 40 |
| Future Volume (vph) | 24 | 480 | 119 | 79 | 491 | 68 | 141 | 134 | 124 | 90 | 178 | 40 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 26.0 | 68.0 | 68.0 | 16.0 | 58.0 | 58.0 | 17.0 | 33.0 | 33.0 | 13.0 | 29.0 | 29.0 |
| Total Split (%) | 20.0% | 52.3% | 52.3% | 12.3% | 44.6% | 44.6% | 13.1% | 25.4% | 25.4% | 10.0% | 22.3% | 22.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 69.6 | 62.5 | 62.5 | 73.7 | 68.9 | 68.9 | 37.3 | 27.4 | 27.4 | 30.3 | 23.7 | 23.7 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.57 | 0.53 | 0.53 | 0.29 | 0.21 | 0.21 | 0.23 | 0.18 | 0.18 |
| v/c Ratio | 0.07 | 0.63 | 0.17 | 0.24 | 0.57 | 0.08 | 0.56 | 0.39 | 0.29 | 0.33 | 0.61 | 0.10 |
| Control Delay | 11.4 | 29.0 | 3.5 | 13.0 | 24.9 | 0.2 | 43.4 | 47.4 | 3.3 | 37.6 | 57.7 | 0.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.4 | 29.0 | 3.5 | 13.0 | 24.9 | 0.2 | 43.4 | 47.4 | 3.3 | 37.6 | 57.7 | 0.5 |
| LOS | B | C | A | B | C | A | D | D | A | D | E | A |
| Approach Delay | | 23.5 | | | 20.8 | | | 32.3 | | | 44.5 | |
| Approach LOS | | C | | | C | | | C | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 129.4 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.63 | |
| Intersection Signal Delay: 27.8 | Intersection LOS: C |
| Intersection Capacity Utilization 69.3% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 24 | 480 | 119 | 79 | 491 | 68 | 141 | 134 | 124 | 90 | 178 | 40 |
| Future Volume (veh/h) | 24 | 480 | 119 | 79 | 491 | 68 | 141 | 134 | 124 | 90 | 178 | 40 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1767 | 1767 | 1767 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 26 | 527 | 131 | 85 | 528 | 0 | 153 | 146 | 135 | 102 | 202 | 45 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 9 | 9 | 9 | 10 | 10 | 10 | 6 | 6 | 6 | 5 | 5 | 5 |
| Cap, veh/h | 365 | 858 | 728 | 349 | 892 | 0 | 289 | 386 | 327 | 305 | 332 | 282 |
| Arrive On Green | 0.04 | 0.49 | 0.49 | 0.06 | 0.51 | 0.00 | 0.08 | 0.21 | 0.21 | 0.05 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 26 | 527 | 131 | 85 | 528 | 0 | 153 | 146 | 135 | 102 | 202 | 45 |
| Grp Sat Flow(s),veh/h/ln | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 1.0 | 28.1 | 6.3 | 3.1 | 27.2 | 0.0 | 9.2 | 8.9 | 9.8 | 6.1 | 13.1 | 3.2 |
| Cycle Q Clear(g_c), s | 1.0 | 28.1 | 6.3 | 3.1 | 27.2 | 0.0 | 9.2 | 8.9 | 9.8 | 6.1 | 13.1 | 3.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 365 | 858 | 728 | 349 | 892 | 0 | 289 | 386 | 327 | 305 | 332 | 282 |
| V/C Ratio(X) | 0.07 | 0.61 | 0.18 | 0.24 | 0.59 | 0.00 | 0.53 | 0.38 | 0.41 | 0.33 | 0.61 | 0.16 |
| Avail Cap(c_a), veh/h | 558 | 858 | 728 | 372 | 892 | 0 | 289 | 386 | 327 | 305 | 332 | 282 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 17.2 | 24.2 | 18.6 | 17.5 | 22.2 | 0.0 | 38.8 | 43.3 | 43.7 | 39.9 | 48.4 | 44.3 |
| Incr Delay (d2), s/veh | 0.1 | 3.3 | 0.5 | 0.4 | 2.9 | 0.0 | 1.8 | 2.8 | 3.8 | 0.6 | 8.0 | 1.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 11.9 | 2.2 | 1.2 | 11.3 | 0.0 | 4.0 | 4.2 | 4.0 | 2.6 | 6.6 | 1.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 17.3 | 27.5 | 19.2 | 17.9 | 25.1 | 0.0 | 40.6 | 46.1 | 47.5 | 40.6 | 56.4 | 45.5 |
| LnGrp LOS | B | C | B | B | C | | D | D | D | D | E | D |
| Approach Vol, veh/h | | 684 | | | 613 | A | | 434 | | | 349 | |
| Approach Delay, s/veh | | 25.5 | | | 24.1 | | | 44.6 | | | 50.4 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.2 | 71.4 | 17.0 | 29.0 | 14.2 | 68.4 | 13.0 | 33.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 19.6 | 52.1 | * 11 | * 23 | 9.4 | * 63 | 7.0 | * 27 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.0 | 29.2 | 11.2 | 15.1 | 5.1 | 30.1 | 8.1 | 11.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.1 | 0.0 | 0.7 | 0.1 | 3.8 | 0.0 | 1.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 33.2 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | TR | L | T | R |
| Maximum Queue (ft) | 130 | 404 | 191 | 194 | 737 | 565 | 174 | 262 | 97 | 164 | 144 |
| Average Queue (ft) | 69 | 210 | 95 | 168 | 723 | 221 | 106 | 79 | 31 | 55 | 49 |
| 95th Queue (ft) | 116 | 315 | 173 | 245 | 731 | 644 | 165 | 173 | 68 | 109 | 104 |
| Link Distance (ft) | | 929 | 929 | | 719 | | | 620 | | 144 | |
| Upstream Blk Time (%) | | | | | 30 | | | | | 0 | 0 |
| Queuing Penalty (veh) | | | | | 274 | | | | | 0 | 0 |
| Storage Bay Dist (ft) | 315 | | | 145 | | 340 | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 2 | | 13 | 58 | | 4 | 4 | | 0 | 0 |
| Queuing Penalty (veh) | | 2 | | 91 | 166 | | 5 | 7 | | 1 | 0 |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | WB | SB |
|-----------------------|-----|------|-----|
| Directions Served | LT | TR | LR |
| Maximum Queue (ft) | 205 | 990 | 367 |
| Average Queue (ft) | 37 | 546 | 260 |
| 95th Queue (ft) | 136 | 1019 | 429 |
| Link Distance (ft) | 719 | 1487 | 352 |
| Upstream Blk Time (%) | | | 6 |
| Queuing Penalty (veh) | | | 0 |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | NB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LT | LTR | LTR |
| Maximum Queue (ft) | 93 | 43 | 78 |
| Average Queue (ft) | 10 | 13 | 37 |
| 95th Queue (ft) | 47 | 33 | 69 |
| Link Distance (ft) | 1434 | 517 | 824 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | 0 | | |
| Queuing Penalty (veh) | 0 | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 176 | 225 |
| Average Queue (ft) | 22 | 90 |
| 95th Queue (ft) | 90 | 171 |
| Link Distance (ft) | 3846 | 655 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 23 | 24 | 66 | 24 |
| Average Queue (ft) | 0 | 1 | 19 | 11 |
| 95th Queue (ft) | 0 | 8 | 45 | 30 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 51 | 89 |
| Average Queue (ft) | 4 | 34 |
| 95th Queue (ft) | 23 | 66 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 64 |
| Average Queue (ft) | 3 | 17 |
| 95th Queue (ft) | 21 | 48 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 28 | 96 |
| Average Queue (ft) | 3 | 38 |
| 95th Queue (ft) | 16 | 68 |
| Link Distance (ft) | 2510 | 472 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 139 | 49 | 63 | 65 |
| Average Queue (ft) | 24 | 3 | 10 | 28 |
| 95th Queue (ft) | 95 | 19 | 38 | 50 |
| Link Distance (ft) | 4030 | 2936 | 637 | 210 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 919 | 172 | 264 | 225 | 390 | 156 | 170 | 493 | 161 |
| Average Queue (ft) | 233 | 533 | 82 | 151 | 96 | 171 | 61 | 92 | 277 | 75 |
| 95th Queue (ft) | 444 | 997 | 141 | 255 | 197 | 295 | 114 | 190 | 470 | 127 |
| Link Distance (ft) | | 904 | | 677 | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | 5 | | | | | | | | |
| Queuing Penalty (veh) | | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | | 26 | | | 0 | 15 | | 4 | 39 | |
| Queuing Penalty (veh) | | 66 | | | 0 | 45 | | 21 | 151 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 104 | 72 | 53 |
| Average Queue (ft) | 30 | 11 | 3 |
| 95th Queue (ft) | 67 | 42 | 20 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 46 |
| Average Queue (ft) | 3 | 21 |
| 95th Queue (ft) | 16 | 40 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB |
|-----------------------|-----|
| Directions Served | LTR |
| Maximum Queue (ft) | 130 |
| Average Queue (ft) | 54 |
| 95th Queue (ft) | 101 |
| Link Distance (ft) | 614 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | L | T | L | T | L | T |
| Maximum Queue (ft) | 74 | 203 | 110 | 244 | 52 | 113 | 177 | 200 |
| Average Queue (ft) | 21 | 88 | 45 | 114 | 29 | 46 | 102 | 85 |
| 95th Queue (ft) | 52 | 163 | 92 | 207 | 59 | 92 | 166 | 158 |
| Link Distance (ft) | | 3762 | | 1100 | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 195 | | 185 | | 190 | |
| Storage Blk Time (%) | | 1 | | 1 | | 0 | | 0 |
| Queuing Penalty (veh) | | 1 | | 3 | | 0 | | 1 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 31 | 52 |
| Average Queue (ft) | 11 | 7 |
| 95th Queue (ft) | 34 | 32 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 48 | 53 |
| Average Queue (ft) | 19 | 3 |
| 95th Queue (ft) | 40 | 21 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 26 | 27 |
| Average Queue (ft) | 1 | 14 |
| 95th Queue (ft) | 9 | 35 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 72 |
| Average Queue (ft) | 31 |
| 95th Queue (ft) | 58 |
| Link Distance (ft) | 663 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | NB | SB |
|-----------------------|-----|-----|------|
| Directions Served | L | R | LT |
| Maximum Queue (ft) | 83 | 22 | 217 |
| Average Queue (ft) | 45 | 2 | 41 |
| 95th Queue (ft) | 79 | 13 | 112 |
| Link Distance (ft) | 484 | | 1053 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 200 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 229 | 486 | 309 | 259 | 406 | 220 | 217 | 173 | 130 | 270 | 327 | 100 |
| Average Queue (ft) | 20 | 198 | 46 | 55 | 204 | 16 | 118 | 73 | 46 | 74 | 138 | 31 |
| 95th Queue (ft) | 91 | 344 | 138 | 136 | 366 | 109 | 214 | 143 | 92 | 177 | 252 | 87 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | | 788 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 10 | | | 9 | | 0 | | | | 49 | 2 |
| Queuing Penalty (veh) | | 15 | | | 13 | | 0 | | | | 64 | 5 |

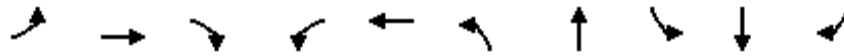
Network Summary

| |
|-----------------------------------|
| Network wide Queuing Penalty: 931 |
|-----------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 752 | 344 | 108 | 688 | 456 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 752 | 344 | 108 | 688 | 456 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 17.0 | 24.2 | 24.2 |
| Total Split (s) | 15.0 | 78.0 | 78.0 | 15.0 | 78.0 | 20.0 | 37.0 | 20.0 | 37.0 | 37.0 |
| Total Split (%) | 10.0% | 52.0% | 52.0% | 10.0% | 52.0% | 13.3% | 24.7% | 13.3% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 71.4 | 64.4 | 64.4 | 77.8 | 72.0 | 46.2 | 30.9 | 44.8 | 30.9 | 30.9 |
| Actuated g/C Ratio | 0.50 | 0.45 | 0.45 | 0.54 | 0.50 | 0.32 | 0.22 | 0.31 | 0.22 | 0.22 |
| v/c Ratio | 0.13 | 0.94 | 0.43 | 0.78 | 0.87 | 1.01 | 0.35 | 0.04 | 0.03 | 0.05 |
| Control Delay | 15.6 | 57.0 | 10.4 | 60.1 | 43.6 | 88.7 | 10.4 | 33.4 | 48.0 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.6 | 57.0 | 10.4 | 60.1 | 43.6 | 88.7 | 10.4 | 33.4 | 48.0 | 0.2 |
| LOS | B | E | B | E | D | F | B | C | D | A |
| Approach Delay | | 41.9 | | | 45.8 | | 69.1 | | 23.3 | |
| Approach LOS | | D | | | D | | E | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 143.6

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 49.2

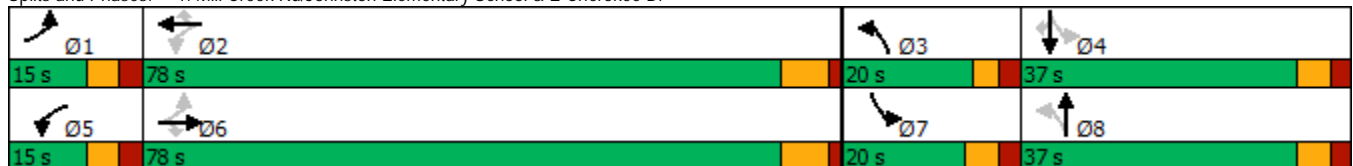
Intersection LOS: D

Intersection Capacity Utilization 93.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 752 | 344 | 108 | 688 | 0 | 456 | 7 | 145 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 752 | 344 | 108 | 688 | 0 | 456 | 7 | 145 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 792 | 362 | 127 | 809 | 0 | 496 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 147 | 849 | 719 | 169 | 902 | 765 | 530 | 412 | | 536 | 415 | 352 |
| Arrive On Green | 0.02 | 0.45 | 0.45 | 0.05 | 0.48 | 0.00 | 0.10 | 0.22 | 0.00 | 0.10 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 792 | 362 | 127 | 809 | 0 | 496 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 0.9 | 56.1 | 22.7 | 5.4 | 55.6 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.8 | 1.5 |
| Cycle Q Clear(g_c), s | 0.9 | 56.1 | 22.7 | 5.4 | 55.6 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.8 | 1.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 147 | 849 | 719 | 169 | 902 | 765 | 530 | 412 | | 536 | 415 | 352 |
| V/C Ratio(X) | 0.14 | 0.93 | 0.50 | 0.75 | 0.90 | 0.00 | 0.94 | 0.02 | | 0.03 | 0.03 | 0.06 |
| Avail Cap(c_a), veh/h | 223 | 951 | 806 | 188 | 944 | 800 | 530 | 412 | | 536 | 415 | 352 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 29.5 | 36.7 | 27.5 | 32.3 | 33.2 | 0.0 | 47.4 | 43.2 | 0.0 | 33.2 | 43.3 | 43.6 |
| Incr Delay (d2), s/veh | 0.4 | 14.7 | 0.5 | 14.0 | 10.9 | 0.0 | 24.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 28.0 | 8.7 | 2.8 | 26.5 | 0.0 | 13.7 | 0.2 | 0.0 | 0.4 | 0.4 | 0.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 30.0 | 51.4 | 28.1 | 46.3 | 44.1 | 0.0 | 71.5 | 43.3 | 0.0 | 33.3 | 43.5 | 43.9 |
| LnGrp LOS | C | D | C | D | D | A | E | D | | C | D | D |
| Approach Vol, veh/h | | 1175 | | | 936 | | | 504 | A | | 52 | |
| Approach Delay, s/veh | | 43.8 | | | 44.4 | | | 71.1 | | | 40.5 | |
| Approach LOS | | D | | | D | | | E | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.0 | 74.9 | 20.0 | 37.0 | 13.5 | 70.3 | 20.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 71.1 | 14.5 | * 31 | * 8.8 | 71.1 | * 14 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.9 | 57.6 | 16.5 | 3.5 | 7.4 | 58.1 | 2.9 | 2.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.5 | 0.0 | 0.1 | 0.0 | 5.3 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 49.1 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 28 | 874 | 769 | 7 | 1 | 23 |
| Future Vol, veh/h | 28 | 874 | 769 | 7 | 1 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 87 | 87 | 60 | 60 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 32 | 993 | 884 | 8 | 2 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|------|-----|
| Conflicting Flow All | 892 | 0 | 0 | 1945 | 888 |
| Stage 1 | - | - | - | 888 | - |
| Stage 2 | - | - | - | 1057 | - |
| Critical Hdwy | 4.11 | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.209 | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 764 | - | - | 72 | 345 |
| Stage 1 | - | - | - | 405 | - |
| Stage 2 | - | - | - | 337 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 764 | - | - | 65 | 345 |
| Mov Cap-2 Maneuver | - | - | - | 65 | - |
| Stage 1 | - | - | - | 367 | - |
| Stage 2 | - | - | - | 337 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 19.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 764 | - | - | - | 292 |
| HCM Lane V/C Ratio | 0.042 | - | - | - | 0.137 |
| HCM Control Delay (s) | 9.9 | 0 | - | - | 19.3 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.5 |

HCM 6th TWSC
 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 46 | 602 | 17 | 5 | 656 | 16 | 8 | 0 | 2 | 6 | 3 | 28 |
| Future Vol, veh/h | 46 | 602 | 17 | 5 | 656 | 16 | 8 | 0 | 2 | 6 | 3 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 91 | 91 | 91 | 50 | 50 | 50 | 93 | 93 | 93 |
| Heavy Vehicles, % | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 52 | 684 | 19 | 5 | 721 | 18 | 16 | 0 | 4 | 6 | 3 | 30 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 739 | 0 | 0 | 703 | 0 | 0 | 1545 | 1537 | 684 | 1540 | 1547 | 730 |
| Stage 1 | - | - | - | - | - | - | 788 | 788 | - | 740 | 740 | - |
| Stage 2 | - | - | - | - | - | - | 757 | 749 | - | 800 | 807 | - |
| Critical Hdwy | 4.11 | - | - | 4.13 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.227 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 872 | - | - | 890 | - | - | 94 | 117 | 452 | 95 | 115 | 426 |
| Stage 1 | - | - | - | - | - | - | 387 | 405 | - | 412 | 426 | - |
| Stage 2 | - | - | - | - | - | - | 403 | 422 | - | 382 | 397 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 872 | - | - | 890 | - | - | 78 | 104 | 452 | 86 | 103 | 426 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 78 | 104 | - | 86 | 103 | - |
| Stage 1 | - | - | - | - | - | - | 349 | 365 | - | 372 | 422 | - |
| Stage 2 | - | - | - | - | - | - | 368 | 418 | - | 342 | 358 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----|------|
| HCM Control Delay, s | 0.6 | 0.1 | 54 | 24.4 |
| HCM LOS | | | F | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 93 | 872 | - | - | 890 | - | - | 225 |
| HCM Lane V/C Ratio | 0.215 | 0.06 | - | - | 0.006 | - | - | 0.177 |
| HCM Control Delay (s) | 54 | 9.4 | 0 | - | 9.1 | 0 | - | 24.4 |
| HCM Lane LOS | F | A | A | - | A | A | - | C |
| HCM 95th %tile Q(veh) | 0.8 | 0.2 | - | - | 0 | - | - | 0.6 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 70 | 556 | 616 | 87 | 46 | 33 |
| Future Vol, veh/h | 70 | 556 | 616 | 87 | 46 | 33 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 93 | 93 | 82 | 82 |
| Heavy Vehicles, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Mvmt Flow | 74 | 585 | 662 | 94 | 56 | 40 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 756 | 0 | - | 0 | 1442 | 709 |
| Stage 1 | - | - | - | - | 709 | - |
| Stage 2 | - | - | - | - | 733 | - |
| Critical Hdwy | 4.11 | - | - | - | 6.45 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 | - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.545 | 3.345 |
| Pot Cap-1 Maneuver | 859 | - | - | - | 144 | 429 |
| Stage 1 | - | - | - | - | 482 | - |
| Stage 2 | - | - | - | - | 470 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 859 | - | - | - | 126 | 429 |
| Mov Cap-2 Maneuver | - | - | - | - | 126 | - |
| Stage 1 | - | - | - | - | 420 | - |
| Stage 2 | - | - | - | - | 470 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 1.1 | 0 | | 46.4 | | |
| HCM LOS | E | | | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 859 | - | - | - | 179 | |
| HCM Lane V/C Ratio | 0.086 | - | - | - | 0.538 | |
| HCM Control Delay (s) | 9.6 | 0 | - | - | 46.4 | |
| HCM Lane LOS | A | A | - | - | E | |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 2.8 | |

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|-------|--------|------|------|
| Int Delay, s/veh | 2.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 19 | 577 | 37 | 21 | 649 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Future Vol, veh/h | 19 | 577 | 37 | 21 | 649 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 91 | 91 | 91 | 73 | 73 | 73 | 50 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 22 | 679 | 44 | 23 | 713 | 5 | 37 | 3 | 12 | 6 | 0 | 14 |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 718 | 0 | 0 | 723 | 0 | 0 | 1514 | 701 | 1515 | 1529 | 716 | |
| Stage 1 | - | - | - | - | - | - | 745 | 745 | - | 762 | 762 | - |
| Stage 2 | - | - | - | - | - | - | 769 | 764 | - | 753 | 767 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.13 | 6.53 | 6.23 | 7.2 | 6.6 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.527 | 4.027 | 3.327 | 3.59 | 4.09 | 3.39 |
| Pot Cap-1 Maneuver | 888 | - | - | 879 | - | - | 98 | 120 | 437 | 94 | 112 | 417 |
| Stage 1 | - | - | - | - | - | - | 404 | 420 | - | 385 | 402 | - |
| Stage 2 | - | - | - | - | - | - | 392 | 411 | - | 390 | 400 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 888 | - | - | 879 | - | - | 89 | 110 | 437 | 84 | 103 | 417 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 89 | 110 | - | 84 | 103 | - |
| Stage 1 | - | - | - | - | - | - | 387 | 402 | - | 369 | 384 | - |
| Stage 2 | - | - | - | - | - | - | 362 | 393 | - | 361 | 383 | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.3 | | | 0.3 | | | 63.3 | | | 26.2 | | |
| HCM LOS | | | | | | | F | | | D | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 111 | 888 | - | - | 879 | - | - | 190 | | | | |
| HCM Lane V/C Ratio | 0.469 | 0.025 | - | - | 0.026 | - | - | 0.105 | | | | |
| HCM Control Delay (s) | 63.3 | 9.2 | 0 | - | 9.2 | 0 | - | 26.2 | | | | |
| HCM Lane LOS | F | A | A | - | A | A | - | D | | | | |
| HCM 95th %tile Q(veh) | 2.1 | 0.1 | - | - | 0.1 | - | - | 0.3 | | | | |

HCM 6th TWSC
6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | ↕ | ↕ | |
| Traffic Vol, veh/h | 54 | 546 | 565 | 57 | 28 | 43 |
| Future Vol, veh/h | 54 | 546 | 565 | 57 | 28 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 88 | 88 | 71 | 71 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 58 | 587 | 642 | 65 | 39 | 61 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 707 | 0 | - | 0 | 1345 |
| Stage 1 | - | - | - | - | 642 |
| Stage 2 | - | - | - | - | 703 |
| Critical Hdwy | 4.11 | - | - | - | 6.43 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | 2.209 | - | - | - | 3.527 |
| Pot Cap-1 Maneuver | 896 | - | - | - | 166 |
| Stage 1 | - | - | - | - | 522 |
| Stage 2 | - | - | - | - | 489 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 896 | - | - | - | 150 |
| Mov Cap-2 Maneuver | - | - | - | - | 150 |
| Stage 1 | - | - | - | - | 472 |
| Stage 2 | - | - | - | - | 489 |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.8 | 0 | 27.8 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 896 | - | - | - | 256 |
| HCM Lane V/C Ratio | 0.065 | - | - | - | 0.391 |
| HCM Control Delay (s) | 9.3 | 0 | - | - | 27.8 |
| HCM Lane LOS | A | A | - | - | D |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 1.8 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 564 | 12 | 8 | 611 | 7 | 11 |
| Future Vol, veh/h | 564 | 12 | 8 | 611 | 7 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 87 | 87 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 606 | 13 | 9 | 702 | 14 | 22 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 619 | 0 | 1326 | 606 |
| Stage 1 | - | - | - | - | 606 | - |
| Stage 2 | - | - | - | - | 720 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 961 | - | 173 | 501 |
| Stage 1 | - | - | - | - | 548 | - |
| Stage 2 | - | - | - | - | 486 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 961 | - | 170 | 501 |
| Mov Cap-2 Maneuver | - | - | - | - | 170 | - |
| Stage 1 | - | - | - | - | 548 | - |
| Stage 2 | - | - | - | - | 479 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0.1 | 19.4 | | | |
| HCM LOS | | | | | | C |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 285 | - | - | 961 | - | |
| HCM Lane V/C Ratio | 0.126 | - | - | 0.01 | - | |
| HCM Control Delay (s) | 19.4 | - | - | 8.8 | 0 | |
| HCM Lane LOS | C | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 39 | 531 | 570 | 30 | 29 | 43 |
| Future Vol, veh/h | 39 | 531 | 570 | 30 | 29 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 89 | 89 | 64 | 64 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 1 | 1 |
| Mvmt Flow | 44 | 597 | 640 | 34 | 45 | 67 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 674 | 0 | - | 0 | 1325 | 640 |
| Stage 1 | - | - | - | - | 640 | - |
| Stage 2 | - | - | - | - | 685 | - |
| Critical Hdwy | 4.11 | - | - | - | 6.41 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.41 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.41 | - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.509 | 3.309 |
| Pot Cap-1 Maneuver | 922 | - | - | - | 173 | 477 |
| Stage 1 | - | - | - | - | 527 | - |
| Stage 2 | - | - | - | - | 502 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 922 | - | - | - | 161 | 477 |
| Mov Cap-2 Maneuver | - | - | - | - | 161 | - |
| Stage 1 | - | - | - | - | 490 | - |
| Stage 2 | - | - | - | - | 502 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.6 | 0 | | 28.1 | | |
| HCM LOS | | | | D | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 922 | - | - | - | 266 | |
| HCM Lane V/C Ratio | 0.048 | - | - | - | 0.423 | |
| HCM Control Delay (s) | 9.1 | 0 | - | - | 28.1 | |
| HCM Lane LOS | A | A | - | - | D | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 2 | |

HCM 6th TWSC
 9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 43 | 601 | 2 | 2 | 601 | 6 | 0 | 0 | 5 | 0 | 1 | 48 |
| Future Vol, veh/h | 43 | 601 | 2 | 2 | 601 | 6 | 0 | 0 | 5 | 0 | 1 | 48 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 96 | 96 | 96 | 42 | 42 | 42 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 46 | 646 | 2 | 2 | 626 | 6 | 0 | 0 | 12 | 0 | 1 | 55 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 632 | 0 | 0 | 648 | 0 | 0 | 1400 | 1375 | 647 | 1378 | 1373 | 629 |
| Stage 1 | - | - | - | - | - | - | 739 | 739 | - | 633 | 633 | - |
| Stage 2 | - | - | - | - | - | - | 661 | 636 | - | 745 | 740 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 956 | - | - | 938 | - | - | 119 | 147 | 475 | 123 | 147 | 486 |
| Stage 1 | - | - | - | - | - | - | 412 | 427 | - | 471 | 476 | - |
| Stage 2 | - | - | - | - | - | - | 455 | 475 | - | 409 | 426 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 956 | - | - | 938 | - | - | 99 | 136 | 475 | 113 | 136 | 486 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 99 | 136 | - | 113 | 136 | - |
| Stage 1 | - | - | - | - | - | - | 381 | 395 | - | 436 | 475 | - |
| Stage 2 | - | - | - | - | - | - | 402 | 474 | - | 369 | 394 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.6 | 0 | 12.8 | 13.9 |
| HCM LOS | | | B | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 475 | 956 | - | - | 938 | - | - | 462 |
| HCM Lane V/C Ratio | 0.025 | 0.048 | - | - | 0.002 | - | - | 0.121 |
| HCM Control Delay (s) | 12.8 | 9 | 0 | - | 8.8 | 0 | - | 13.9 |
| HCM Lane LOS | B | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0.2 | - | - | 0 | - | - | 0.4 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020

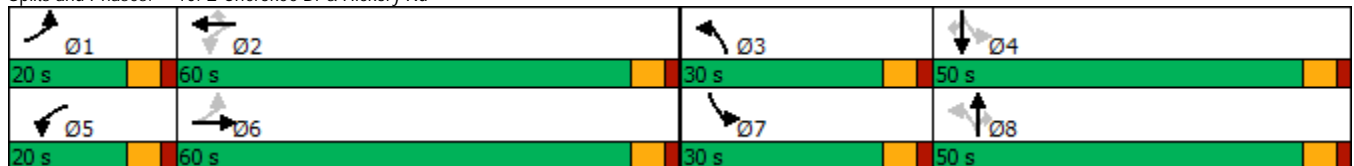


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 218 | 367 | 248 | 567 | 100 | 85 | 292 | 231 | 66 | 323 | 233 |
| Future Volume (vph) | 218 | 367 | 248 | 567 | 100 | 85 | 292 | 231 | 66 | 323 | 233 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 68.0 | 54.0 | 68.0 | 54.0 | 54.0 | 55.1 | 45.0 | 45.0 | 53.2 | 44.0 | 44.0 |
| Actuated g/C Ratio | 0.47 | 0.37 | 0.47 | 0.37 | 0.37 | 0.38 | 0.31 | 0.31 | 0.36 | 0.30 | 0.30 |
| v/c Ratio | 1.03 | 0.71 | 0.79 | 0.88 | 0.16 | 0.31 | 0.55 | 0.38 | 0.23 | 0.64 | 0.39 |
| Control Delay | 99.4 | 46.0 | 40.9 | 58.4 | 6.9 | 29.6 | 46.7 | 6.9 | 28.3 | 50.7 | 6.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 99.4 | 46.0 | 40.9 | 58.4 | 6.9 | 29.6 | 46.7 | 6.9 | 28.3 | 50.7 | 6.1 |
| LOS | F | D | D | E | A | C | D | A | C | D | A |
| Approach Delay | | 64.0 | | 48.0 | | | 29.2 | | | 31.6 | |
| Approach LOS | | E | | D | | | C | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 146.2 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.03 | |
| Intersection Signal Delay: 44.1 | Intersection LOS: D |
| Intersection Capacity Utilization 83.9% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 218 | 367 | 60 | 248 | 567 | 100 | 85 | 292 | 231 | 66 | 323 | 233 |
| Future Volume (veh/h) | 218 | 367 | 60 | 248 | 567 | 100 | 85 | 292 | 231 | 66 | 323 | 233 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 245 | 412 | 0 | 267 | 610 | 0 | 92 | 317 | 251 | 73 | 359 | 259 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Cap, veh/h | 290 | 706 | | 424 | 713 | | 254 | 596 | 505 | 272 | 576 | 488 |
| Arrive On Green | 0.10 | 0.38 | 0.00 | 0.10 | 0.38 | 0.00 | 0.05 | 0.32 | 0.32 | 0.04 | 0.31 | 0.31 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 245 | 412 | 0 | 267 | 610 | 0 | 92 | 317 | 251 | 73 | 359 | 259 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 12.0 | 25.1 | 0.0 | 13.1 | 42.5 | 0.0 | 5.0 | 19.8 | 18.2 | 4.0 | 23.5 | 19.3 |
| Cycle Q Clear(g_c), s | 12.0 | 25.1 | 0.0 | 13.1 | 42.5 | 0.0 | 5.0 | 19.8 | 18.2 | 4.0 | 23.5 | 19.3 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 290 | 706 | | 424 | 713 | | 254 | 596 | 505 | 272 | 576 | 488 |
| V/C Ratio(X) | 0.85 | 0.58 | | 0.63 | 0.86 | | 0.36 | 0.53 | 0.50 | 0.27 | 0.62 | 0.53 |
| Avail Cap(c_a), veh/h | 290 | 706 | | 424 | 713 | | 468 | 596 | 505 | 499 | 576 | 488 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 31.5 | 35.5 | 0.0 | 26.1 | 40.9 | 0.0 | 33.4 | 40.2 | 39.7 | 33.0 | 42.4 | 40.9 |
| Incr Delay (d2), s/veh | 20.0 | 3.5 | 0.0 | 3.0 | 12.6 | 0.0 | 0.9 | 1.7 | 1.6 | 0.5 | 5.0 | 4.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.6 | 12.0 | 0.0 | 5.8 | 21.8 | 0.0 | 2.2 | 9.4 | 7.4 | 1.8 | 11.6 | 8.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 51.5 | 39.0 | 0.0 | 29.1 | 53.5 | 0.0 | 34.2 | 41.9 | 41.3 | 33.5 | 47.4 | 45.0 |
| LnGrp LOS | D | D | | C | D | | C | D | D | C | D | D |
| Approach Vol, veh/h | | 657 | A | | 877 | A | | 660 | | | 691 | |
| Approach Delay, s/veh | | 43.7 | | | 46.0 | | | 40.6 | | | 45.1 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 13.0 | 50.0 | 20.0 | 60.0 | 11.8 | 51.2 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 14.0 | 44.5 | 7.0 | 25.5 | 15.1 | 27.1 | 6.0 | 21.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.3 | 0.2 | 5.6 | 0.0 | 4.8 | 0.1 | 5.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 44.0 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | W | | W | |
| Traffic Vol, veh/h | 83 | 51 | 57 | 368 | 346 | 91 |
| Future Vol, veh/h | 83 | 51 | 57 | 368 | 346 | 91 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 93 | 93 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 91 | 56 | 61 | 396 | 380 | 100 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 948 | 430 | 480 | 0 | 0 |
| Stage 1 | 430 | - | - | - | - |
| Stage 2 | 518 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 291 | 627 | 1093 | - | - |
| Stage 1 | 658 | - | - | - | - |
| Stage 2 | 600 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 270 | 627 | 1093 | - | - |
| Mov Cap-2 Maneuver | 270 | - | - | - | - |
| Stage 1 | 611 | - | - | - | - |
| Stage 2 | 600 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.4 | 1.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1093 | - | 436 | - | - |
| HCM Lane V/C Ratio | 0.056 | - | 0.338 | - | - |
| HCM Control Delay (s) | 8.5 | 0 | 17.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 1.5 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 38 | 415 | 407 | 2 | 2 | 28 |
| Future Vol, veh/h | 38 | 415 | 407 | 2 | 2 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 40 | 441 | 438 | 2 | 2 | 34 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 440 | 0 | - | 0 | 960 |
| Stage 1 | - | - | - | - | 439 |
| Stage 2 | - | - | - | - | 521 |
| Critical Hdwy | 4.1 | - | - | - | 6.4 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 |
| Pot Cap-1 Maneuver | 1131 | - | - | - | 287 |
| Stage 1 | - | - | - | - | 654 |
| Stage 2 | - | - | - | - | 600 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1131 | - | - | - | 274 |
| Mov Cap-2 Maneuver | - | - | - | - | 274 |
| Stage 1 | - | - | - | - | 623 |
| Stage 2 | - | - | - | - | 600 |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 11.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1131 | - | - | - | 573 |
| HCM Lane V/C Ratio | 0.036 | - | - | - | 0.063 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 11.7 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↕ | | | | ↕ | | | | ↕ | | ↕ | |
| Traffic Vol, veh/h | 124 | 5 | 2 | 3 | 4 | 8 | 1 | 420 | 2 | 3 | 404 | 194 |
| Future Vol, veh/h | 124 | 5 | 2 | 3 | 4 | 8 | 1 | 420 | 2 | 3 | 404 | 194 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 75 | 75 | 75 | 94 | 94 | 94 | 92 | 92 | 92 |
| Heavy Vehicles, % | 8 | 8 | 8 | 7 | 7 | 7 | 0 | 0 | 0 | 2 | 2 | 2 |
| Mvmt Flow | 148 | 6 | 2 | 4 | 5 | 11 | 1 | 447 | 2 | 3 | 439 | 211 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-------|-------|--------|---|---|--------|---|---|
| Conflicting Flow All | 1009 | 1002 | 545 | 1005 | 1106 | 448 | 650 | 0 | 0 | 449 | 0 | 0 |
| Stage 1 | 551 | 551 | - | 450 | 450 | - | - | - | - | - | - | - |
| Stage 2 | 458 | 451 | - | 555 | 656 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.18 | 6.58 | 6.28 | 7.17 | 6.57 | 6.27 | 4.1 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.572 | 4.072 | 3.372 | 3.563 | 4.063 | 3.363 | 2.2 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 213 | 237 | 527 | 215 | 206 | 600 | 946 | - | - | 1111 | - | - |
| Stage 1 | 508 | 506 | - | 579 | 563 | - | - | - | - | - | - | - |
| Stage 2 | 571 | 561 | - | 507 | 455 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 204 | 236 | 527 | 209 | 205 | 600 | 946 | - | - | 1111 | - | - |
| Mov Cap-2 Maneuver | 204 | 236 | - | 209 | 205 | - | - | - | - | - | - | - |
| Stage 1 | 507 | 504 | - | 578 | 562 | - | - | - | - | - | - | - |
| Stage 2 | 555 | 560 | - | 497 | 453 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 61.6 | | | 17.1 | | | 0 | | | 0 | | |
| HCM LOS | F | | | C | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 946 | - | - | 207 | 318 | 1111 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.753 | 0.063 | 0.003 | - | - |
| HCM Control Delay (s) | 8.8 | 0 | - | 61.6 | 17.1 | 8.2 | 0 | - |
| HCM Lane LOS | A | A | - | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 5.1 | 0.2 | 0 | - | - |

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 67 | 415 | 44 | 11 | 342 | 52 | 172 | 149 | 31 | 72 | 71 | 79 |
| Future Volume (vph) | 67 | 415 | 44 | 11 | 342 | 52 | 172 | 149 | 31 | 72 | 71 | 79 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 64.0 | 60.8 | 60.8 | 59.2 | 54.6 | 54.6 | 29.0 | 18.5 | 18.5 | 22.2 | 12.4 | 12.4 |
| Actuated g/C Ratio | 0.59 | 0.56 | 0.56 | 0.54 | 0.50 | 0.50 | 0.27 | 0.17 | 0.17 | 0.20 | 0.11 | 0.11 |
| v/c Ratio | 0.14 | 0.42 | 0.05 | 0.03 | 0.41 | 0.07 | 0.54 | 0.52 | 0.09 | 0.30 | 0.41 | 0.34 |
| Control Delay | 10.9 | 17.8 | 0.1 | 10.8 | 20.7 | 0.2 | 37.4 | 50.6 | 0.5 | 32.6 | 51.8 | 7.0 |
| 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 | 10.9 | 17.8 | 0.1 | 10.8 | 20.7 | 0.2 | 37.4 | 50.6 | 0.5 | 32.6 | 51.8 | 7.0 |
| LOS | B | B | A | B | C | A | D | D | A | C | D | A |
| Approach Delay | | 15.4 | | | 17.8 | | | 39.8 | | | 29.7 | |
| Approach LOS | | B | | | B | | | D | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 108.7 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.54 | |
| Intersection Signal Delay: 24.0 | Intersection LOS: C |
| Intersection Capacity Utilization 61.4% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr

| | | | |
|------|------|------|------|
| | | | |
| 20 s | 60 s | 20 s | 30 s |
| | | | |
| 20 s | 60 s | 20 s | 30 s |

HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 67 | 415 | 44 | 11 | 342 | 52 | 172 | 149 | 31 | 72 | 71 | 79 |
| Future Volume (veh/h) | 67 | 415 | 44 | 11 | 342 | 52 | 172 | 149 | 31 | 72 | 71 | 79 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 72 | 446 | 0 | 12 | 389 | 0 | 191 | 166 | 0 | 90 | 89 | 0 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.90 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cap, veh/h | 548 | 1051 | | 495 | 1015 | | 321 | 251 | | 241 | 149 | |
| Arrive On Green | 0.03 | 0.56 | 0.00 | 0.01 | 0.53 | 0.00 | 0.11 | 0.13 | 0.00 | 0.06 | 0.08 | 0.00 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 72 | 446 | 0 | 12 | 389 | 0 | 191 | 166 | 0 | 90 | 89 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 1.8 | 13.9 | 0.0 | 0.3 | 12.1 | 0.0 | 9.5 | 8.5 | 0.0 | 4.6 | 4.6 | 0.0 |
| Cycle Q Clear(g_c), s | 1.8 | 13.9 | 0.0 | 0.3 | 12.1 | 0.0 | 9.5 | 8.5 | 0.0 | 4.6 | 4.6 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 548 | 1051 | | 495 | 1015 | | 321 | 251 | | 241 | 149 | |
| V/C Ratio(X) | 0.13 | 0.42 | | 0.02 | 0.38 | | 0.59 | 0.66 | | 0.37 | 0.60 | |
| Avail Cap(c_a), veh/h | 736 | 1051 | | 725 | 1015 | | 364 | 448 | | 381 | 448 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 10.6 | 13.0 | 0.0 | 11.2 | 13.8 | 0.0 | 35.7 | 41.6 | 0.0 | 39.4 | 45.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.1 | 1.3 | 0.0 | 0.0 | 1.1 | 0.0 | 2.1 | 3.0 | 0.0 | 1.0 | 3.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 5.5 | 0.0 | 0.1 | 5.0 | 0.0 | 4.2 | 4.0 | 0.0 | 2.0 | 2.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 10.7 | 14.2 | 0.0 | 11.2 | 14.9 | 0.0 | 37.7 | 44.6 | 0.0 | 40.4 | 48.7 | 0.0 |
| LnGrp LOS | B | B | | B | B | | D | D | | D | D | |
| Approach Vol, veh/h | | 518 | A | | 401 | A | | 357 | A | | 179 | A |
| Approach Delay, s/veh | | 13.7 | | | 14.8 | | | 40.9 | | | 44.5 | |
| Approach LOS | | B | | | B | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.5 | 60.0 | 17.6 | 14.0 | 7.1 | 62.3 | 12.1 | 19.4 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.8 | 14.1 | 11.5 | 6.6 | 2.3 | 15.9 | 6.6 | 10.5 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.3 | 0.1 | 0.3 | 0.0 | 2.7 | 0.1 | 0.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 24.5 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
 15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 10 | 12 | 456 | 364 | 4 |
| Future Vol, veh/h | 5 | 10 | 12 | 456 | 364 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 54 | 54 | 86 | 86 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 9 | 19 | 14 | 530 | 444 | 5 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1005 | 447 | 449 | 0 | 0 |
| Stage 1 | 447 | - | - | - | - |
| Stage 2 | 558 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 270 | 616 | 1122 | - | - |
| Stage 1 | 649 | - | - | - | - |
| Stage 2 | 577 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 265 | 616 | 1122 | - | - |
| Mov Cap-2 Maneuver | 265 | - | - | - | - |
| Stage 1 | 637 | - | - | - | - |
| Stage 2 | 577 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 14 | 0.2 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1122 | - | 427 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.065 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 14 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.2 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 31 | 9 | 12 | 427 | 365 | 24 |
| Future Vol, veh/h | 31 | 9 | 12 | 427 | 365 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 56 | 56 | 89 | 89 | 84 | 84 |
| Heavy Vehicles, % | 3 | 3 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 55 | 16 | 13 | 480 | 435 | 29 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 956 | 450 | 464 | 0 | 0 |
| Stage 1 | 450 | - | - | - | - |
| Stage 2 | 506 | - | - | - | - |
| Critical Hdwy | 6.43 | 6.23 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.43 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.43 | - | - | - | - |
| Follow-up Hdwy | 3.527 | 3.327 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 285 | 607 | 1108 | - | - |
| Stage 1 | 640 | - | - | - | - |
| Stage 2 | 603 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 280 | 607 | 1108 | - | - |
| Mov Cap-2 Maneuver | 280 | - | - | - | - |
| Stage 1 | 630 | - | - | - | - |
| Stage 2 | 603 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.5 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1108 | - | 319 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.224 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | 19.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.8 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 424 | 32 | 4 | 367 | 29 | 6 |
| Future Vol, veh/h | 424 | 32 | 4 | 367 | 29 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 83 | 83 | 51 | 51 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 493 | 37 | 5 | 442 | 57 | 12 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 530 | 0 |
| Stage 1 | - | - | - | 512 |
| Stage 2 | - | - | - | 452 |
| Critical Hdwy | - | - | 4.1 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - |
| Pot Cap-1 Maneuver | - | - | 1048 | - |
| Stage 1 | - | - | - | 606 |
| Stage 2 | - | - | - | 645 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1048 | - |
| Mov Cap-2 Maneuver | - | - | - | 284 |
| Stage 1 | - | - | - | 606 |
| Stage 2 | - | - | - | 641 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 19.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 311 | - | - | 1048 | - |
| HCM Lane V/C Ratio | 0.221 | - | - | 0.005 | - |
| HCM Control Delay (s) | 19.8 | - | - | 8.5 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 14 | 48 | 8 | 558 | 412 | 8 |
| Future Vol, veh/h | 14 | 48 | 8 | 558 | 412 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 84 | 84 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 15 | 53 | 10 | 664 | 448 | 9 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1137 | 453 | 457 | 0 | 0 |
| Stage 1 | 453 | - | - | - | - |
| Stage 2 | 684 | - | - | - | - |
| Critical Hdwy | 6.5 | 6.3 | 4.11 | - | - |
| Critical Hdwy Stg 1 | 5.5 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.5 | - | - | - | - |
| Follow-up Hdwy | 3.59 | 3.39 | 2.209 | - | - |
| Pot Cap-1 Maneuver | 215 | 590 | 1109 | - | - |
| Stage 1 | 624 | - | - | - | - |
| Stage 2 | 487 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 212 | 590 | 1109 | - | - |
| Mov Cap-2 Maneuver | 212 | - | - | - | - |
| Stage 1 | 615 | - | - | - | - |
| Stage 2 | 487 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.2 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1109 | - | 421 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.162 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | 15.2 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.6 | - | - |

HCM 6th TWSC
19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 37 | 523 | 40 | 25 | 401 |
| Future Vol, veh/h | 17 | 37 | 523 | 40 | 25 | 401 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 71 | 71 | 88 | 88 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 6 | 6 | 6 | 6 |
| Mvmt Flow | 24 | 52 | 594 | 45 | 27 | 441 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 1089 | 594 | 0 | 0 | 639 | 0 |
| Stage 1 | 594 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | 241 | 509 | - | - | 926 | - |
| Stage 1 | 555 | - | - | - | - | - |
| Stage 2 | 617 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | 232 | 509 | - | - | 926 | - |
| Mov Cap-2 Maneuver | 232 | - | - | - | - | - |
| Stage 1 | 555 | - | - | - | - | - |
| Stage 2 | 593 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 15.9 | 0 | 0.5 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|------|-----|
| Capacity (veh/h) | - | - | 232 | 509 | 926 | - |
| HCM Lane V/C Ratio | - | - | 0.103 | 0.102 | 0.03 | - |
| HCM Control Delay (s) | - | - | 22.3 | 12.9 | 9 | 0 |
| HCM Lane LOS | - | - | C | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.3 | 0.1 | - |

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 44 | 609 | 108 | 117 | 590 | 96 | 153 | 182 | 139 | 143 | 158 | 57 |
| Future Volume (vph) | 44 | 609 | 108 | 117 | 590 | 96 | 153 | 182 | 139 | 143 | 158 | 57 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 | 62.0 | 15.0 | 62.0 | 62.0 | 15.0 | 31.0 | 31.0 | 12.0 | 28.0 | 28.0 |
| Total Split (%) | 12.5% | 51.7% | 51.7% | 12.5% | 51.7% | 51.7% | 12.5% | 25.8% | 25.8% | 10.0% | 23.3% | 23.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 63.6 | 56.5 | 56.5 | 65.5 | 59.4 | 59.4 | 33.6 | 25.4 | 25.4 | 28.0 | 22.4 | 22.4 |
| Actuated g/C Ratio | 0.53 | 0.47 | 0.47 | 0.55 | 0.50 | 0.50 | 0.28 | 0.21 | 0.21 | 0.23 | 0.19 | 0.19 |
| v/c Ratio | 0.15 | 0.75 | 0.14 | 0.45 | 0.73 | 0.13 | 0.61 | 0.53 | 0.35 | 0.65 | 0.54 | 0.17 |
| Control Delay | 11.9 | 32.8 | 2.1 | 16.6 | 31.0 | 1.6 | 43.1 | 47.6 | 8.1 | 48.6 | 50.7 | 0.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.9 | 32.8 | 2.1 | 16.6 | 31.0 | 1.6 | 43.1 | 47.6 | 8.1 | 48.6 | 50.7 | 0.9 |
| LOS | B | C | A | B | C | A | D | D | A | D | D | A |
| Approach Delay | | 27.3 | | | 25.4 | | | 34.5 | | | 41.9 | |
| Approach LOS | | C | | | C | | | C | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 119.9 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.75 | |
| Intersection Signal Delay: 30.5 | Intersection LOS: C |
| Intersection Capacity Utilization 76.0% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy

| | | | |
|------------|------------|------------|------------|
| Ø1 15 s | Ø2 62 s | Ø3 15 s | Ø4 28 s |
| Ø5 15 s | Ø6 62 s | Ø7 12 s | Ø8 31 s |

HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 44 | 609 | 108 | 117 | 590 | 96 | 153 | 182 | 139 | 143 | 158 | 57 |
| Future Volume (veh/h) | 44 | 609 | 108 | 117 | 590 | 96 | 153 | 182 | 139 | 143 | 158 | 57 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1811 | 1811 | 1811 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 46 | 641 | 114 | 129 | 648 | 0 | 180 | 214 | 164 | 172 | 190 | 69 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.85 | 0.85 | 0.85 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 1 | 1 | 1 |
| Cap, veh/h | 304 | 860 | 729 | 301 | 881 | | 302 | 403 | 341 | 263 | 352 | 298 |
| Arrive On Green | 0.05 | 0.47 | 0.47 | 0.07 | 0.49 | 0.00 | 0.07 | 0.21 | 0.21 | 0.05 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 46 | 641 | 114 | 129 | 648 | 0 | 180 | 214 | 164 | 172 | 190 | 69 |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 1.6 | 34.3 | 5.0 | 4.5 | 34.3 | 0.0 | 8.8 | 12.0 | 10.7 | 6.0 | 10.9 | 4.4 |
| Cycle Q Clear(g_c), s | 1.6 | 34.3 | 5.0 | 4.5 | 34.3 | 0.0 | 8.8 | 12.0 | 10.7 | 6.0 | 10.9 | 4.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 304 | 860 | 729 | 301 | 881 | | 302 | 403 | 341 | 263 | 352 | 298 |
| V/C Ratio(X) | 0.15 | 0.74 | 0.16 | 0.43 | 0.74 | | 0.60 | 0.53 | 0.48 | 0.65 | 0.54 | 0.23 |
| Avail Cap(c_a), veh/h | 338 | 860 | 729 | 308 | 881 | | 302 | 403 | 341 | 263 | 352 | 298 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 18.7 | 25.8 | 18.1 | 19.9 | 24.6 | 0.0 | 38.0 | 42.0 | 41.5 | 42.7 | 44.1 | 41.4 |
| Incr Delay (d2), s/veh | 0.2 | 5.8 | 0.5 | 1.0 | 5.4 | 0.0 | 3.2 | 5.0 | 4.8 | 5.7 | 5.8 | 1.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 15.3 | 1.8 | 1.7 | 15.0 | 0.0 | 4.5 | 6.0 | 4.6 | 2.2 | 5.5 | 1.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 18.9 | 31.6 | 18.5 | 20.9 | 30.1 | 0.0 | 41.2 | 46.9 | 46.2 | 48.4 | 49.9 | 43.2 |
| LnGrp LOS | B | C | B | C | C | | D | D | D | D | D | D |
| Approach Vol, veh/h | | 801 | | | 777 | A | | 558 | | | 431 | |
| Approach Delay, s/veh | | 29.0 | | | 28.5 | | | 44.9 | | | 48.2 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.7 | 64.2 | 15.0 | 28.0 | 14.5 | 62.4 | 12.0 | 31.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 8.6 | 56.1 | * 8.8 | * 22 | 8.4 | * 57 | 6.0 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.6 | 36.3 | 10.8 | 12.9 | 6.5 | 36.3 | 8.0 | 14.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.9 | 0.0 | 0.7 | 0.1 | 4.2 | 0.0 | 1.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 35.6 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 938 | 163 | 194 | 643 | 174 | 635 | 24 | 61 | 39 |
| Average Queue (ft) | 23 | 384 | 45 | 102 | 339 | 165 | 335 | 5 | 10 | 8 |
| 95th Queue (ft) | 133 | 613 | 102 | 218 | 555 | 202 | 631 | 20 | 35 | 24 |
| Link Distance (ft) | | 929 | 929 | | 719 | | 620 | | 144 | |
| Upstream Blk Time (%) | | 0 | | | | | 1 | | | |
| Queuing Penalty (veh) | | 0 | | | | | 0 | | | |
| Storage Bay Dist (ft) | 315 | | | 145 | | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 14 | | 2 | 27 | 46 | 0 | | | |
| Queuing Penalty (veh) | | 3 | | 15 | 29 | 70 | 0 | | | |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 313 | 50 |
| Average Queue (ft) | 42 | 12 |
| 95th Queue (ft) | 174 | 37 |
| Link Distance (ft) | 719 | 352 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LT | LTR | LTR | LTR |
| Maximum Queue (ft) | 113 | 32 | 22 | 53 |
| Average Queue (ft) | 31 | 2 | 6 | 24 |
| 95th Queue (ft) | 87 | 14 | 21 | 50 |
| Link Distance (ft) | 1434 | 3846 | 517 | 824 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | 1 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 323 | 75 |
| Average Queue (ft) | 80 | 35 |
| 95th Queue (ft) | 229 | 66 |
| Link Distance (ft) | 3846 | 655 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 49 | 131 | 39 | 43 |
| Average Queue (ft) | 16 | 10 | 17 | 8 |
| 95th Queue (ft) | 48 | 54 | 40 | 31 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 181 | 63 |
| Average Queue (ft) | 30 | 26 |
| 95th Queue (ft) | 110 | 53 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 150 | 47 |
| Average Queue (ft) | 14 | 13 |
| 95th Queue (ft) | 78 | 37 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | WB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LT | R | LR |
| Maximum Queue (ft) | 158 | 22 | 74 |
| Average Queue (ft) | 34 | 1 | 35 |
| 95th Queue (ft) | 106 | 7 | 59 |
| Link Distance (ft) | 2510 | | 472 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 180 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 114 | 25 | 22 | 63 |
| Average Queue (ft) | 31 | 1 | 2 | 27 |
| 95th Queue (ft) | 94 | 9 | 13 | 51 |
| Link Distance (ft) | 4030 | 2936 | 637 | 210 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 384 | 711 | 350 | 692 | 400 | 225 | 306 | 128 | 170 | 364 | 218 |
| Average Queue (ft) | 223 | 362 | 212 | 423 | 29 | 60 | 151 | 54 | 77 | 204 | 84 |
| 95th Queue (ft) | 425 | 641 | 386 | 748 | 198 | 146 | 243 | 103 | 190 | 307 | 148 |
| Link Distance (ft) | | 904 | | 677 | | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | | | 4 | | | | | | | |
| Queuing Penalty (veh) | | | | 0 | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 350 | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | | 18 | 0 | 21 | | | 12 | | 0 | 38 | |
| Queuing Penalty (veh) | | 40 | 2 | 73 | | | 39 | | 1 | 113 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 104 | 94 | 22 |
| Average Queue (ft) | 31 | 31 | 0 |
| 95th Queue (ft) | 67 | 79 | 0 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 31 | 23 |
| Average Queue (ft) | 8 | 16 |
| 95th Queue (ft) | 29 | 31 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB | NB |
|-----------------------|-----|-----|------|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 109 | 90 | 26 |
| Average Queue (ft) | 50 | 19 | 1 |
| 95th Queue (ft) | 94 | 55 | 9 |
| Link Distance (ft) | 614 | 581 | 1624 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | L | T | L | T | L | T |
| Maximum Queue (ft) | 94 | 188 | 30 | 226 | 188 | 223 | 118 | 184 |
| Average Queue (ft) | 35 | 100 | 3 | 107 | 101 | 102 | 57 | 67 |
| 95th Queue (ft) | 77 | 172 | 18 | 191 | 169 | 167 | 101 | 127 |
| Link Distance (ft) | | 3762 | | 1100 | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 195 | | 185 | | 190 | |
| Storage Blk Time (%) | | 1 | | 1 | 1 | 1 | | 0 |
| Queuing Penalty (veh) | | 1 | | 1 | 1 | 2 | | 0 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 30 | 73 |
| Average Queue (ft) | 6 | 8 |
| 95th Queue (ft) | 27 | 38 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 51 | 53 |
| Average Queue (ft) | 22 | 7 |
| 95th Queue (ft) | 46 | 34 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 26 | 49 |
| Average Queue (ft) | 3 | 19 |
| 95th Queue (ft) | 16 | 44 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 119 | 52 |
| Average Queue (ft) | 41 | 5 |
| 95th Queue (ft) | 77 | 25 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | SB |
|-----------------------|-----|------|
| Directions Served | L | LT |
| Maximum Queue (ft) | 43 | 73 |
| Average Queue (ft) | 8 | 12 |
| 95th Queue (ft) | 26 | 45 |
| Link Distance (ft) | 484 | 1053 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 230 | 402 | 310 | 259 | 392 | 220 | 136 | 241 | 177 | 240 | 310 | 100 |
| Average Queue (ft) | 49 | 242 | 47 | 103 | 258 | 47 | 85 | 118 | 58 | 95 | 106 | 42 |
| 95th Queue (ft) | 154 | 399 | 138 | 232 | 391 | 196 | 136 | 206 | 121 | 175 | 212 | 101 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | 788 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 20 | | | 18 | | | 0 | | 0 | 38 | 2 |
| Queuing Penalty (veh) | | 30 | | | 38 | | | 1 | | 1 | 77 | 6 |

Network Summary

| |
|-----------------------------------|
| Network wide Queuing Penalty: 542 |
|-----------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 35.0 | 58.0 | 58.0 | 30.0 | 53.0 | 53.0 | 25.0 | 37.0 | 25.0 | 37.0 | 37.0 |
| Total Split (%) | 23.3% | 38.7% | 38.7% | 20.0% | 35.3% | 35.3% | 16.7% | 24.7% | 16.7% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 56.0 | 43.8 | 43.8 | 70.6 | 52.3 | 52.3 | 49.2 | 30.9 | 51.7 | 32.9 | 32.9 |
| Actuated g/C Ratio | 0.40 | 0.31 | 0.31 | 0.51 | 0.38 | 0.38 | 0.35 | 0.22 | 0.37 | 0.24 | 0.24 |
| v/c Ratio | 0.60 | 0.78 | 0.70 | 0.81 | 1.38 | 0.15 | 0.56 | 0.39 | 0.24 | 0.35 | 0.36 |
| Control Delay | 38.7 | 54.0 | 10.8 | 39.3 | 215.3 | 4.3 | 36.3 | 43.2 | 30.1 | 49.6 | 8.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 38.7 | 54.0 | 10.8 | 39.3 | 215.3 | 4.3 | 36.3 | 43.2 | 30.1 | 49.6 | 8.6 |
| LOS | D | D | B | D | F | A | D | D | C | D | A |
| Approach Delay | | 30.5 | | | 160.3 | | | 38.8 | | 27.8 | |
| Approach LOS | | C | | | F | | | D | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 139.1

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.38

Intersection Signal Delay: 83.7

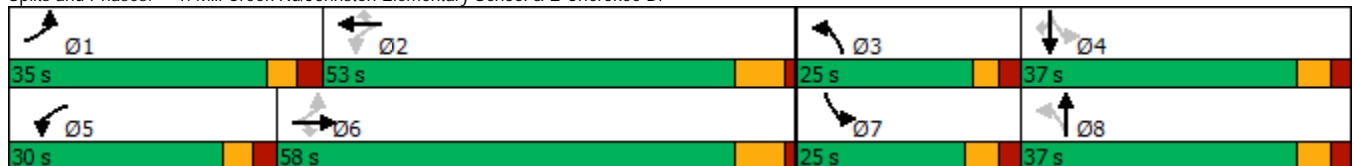
Intersection LOS: F

Intersection Capacity Utilization 88.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|-------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 151 | 658 | 558 | 349 | 788 | 668 | 436 | 394 | | 503 | 393 | 333 |
| Arrive On Green | 0.06 | 0.35 | 0.35 | 0.12 | 0.42 | 0.42 | 0.13 | 0.21 | 0.00 | 0.13 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 6.1 | 30.0 | 51.1 | 15.3 | 60.6 | 5.7 | 17.3 | 5.4 | 0.0 | 6.4 | 10.0 | 15.1 |
| Cycle Q Clear(g_c), s | 6.1 | 30.0 | 51.1 | 15.3 | 60.6 | 5.7 | 17.3 | 5.4 | 0.0 | 6.4 | 10.0 | 15.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 151 | 658 | 558 | 349 | 788 | 668 | 436 | 394 | | 503 | 393 | 333 |
| V/C Ratio(X) | 0.78 | 0.69 | 1.06 | 0.88 | 1.23 | 0.15 | 0.62 | 0.21 | | 0.22 | 0.38 | 0.55 |
| Avail Cap(c_a), veh/h | 403 | 658 | 558 | 423 | 788 | 668 | 439 | 394 | | 503 | 393 | 333 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 35.7 | 39.6 | 46.5 | 29.5 | 41.7 | 25.8 | 36.7 | 46.6 | 0.0 | 33.1 | 48.2 | 50.2 |
| Incr Delay (d2), s/veh | 8.4 | 3.0 | 55.3 | 16.7 | 113.6 | 0.1 | 2.7 | 1.2 | 0.0 | 1.0 | 2.7 | 6.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 14.3 | 28.2 | 8.1 | 52.4 | 2.2 | 7.7 | 2.6 | 0.0 | 2.9 | 4.9 | 6.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 44.1 | 42.7 | 101.7 | 46.2 | 155.2 | 25.9 | 39.4 | 47.9 | 0.0 | 34.1 | 51.0 | 56.5 |
| LnGrp LOS | D | D | F | D | F | C | D | D | | C | D | E |
| Approach Vol, veh/h | | 1163 | | | 1377 | | | 356 | A | | 440 | |
| Approach Delay, s/veh | | 72.9 | | | 121.3 | | | 41.4 | | | 49.1 | |
| Approach LOS | | E | | | F | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.5 | 67.5 | 24.8 | 37.2 | 24.0 | 58.0 | 25.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 29 | 46.1 | 19.5 | * 31 | * 24 | 51.1 | * 19 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.1 | 62.6 | 19.3 | 17.1 | 17.3 | 53.1 | 8.4 | 7.4 | | | | |
| Green Ext Time (p_c), s | 0.3 | 0.0 | 0.0 | 1.2 | 0.5 | 0.0 | 0.2 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 86.4 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 11 | 602 | 1115 | 4 | 6 | 37 |
| Future Vol, veh/h | 11 | 602 | 1115 | 4 | 6 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 82 | 82 | 83 | 83 |
| Heavy Vehicles, % | 5 | 5 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 12 | 647 | 1360 | 5 | 7 | 45 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1365 | 0 | - | 0 | 2034 | 1363 |
| Stage 1 | - | - | - | - | 1363 | - |
| Stage 2 | - | - | - | - | 671 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | 494 | - | - | - | 61 | 176 |
| Stage 1 | - | - | - | - | 232 | - |
| Stage 2 | - | - | - | - | 499 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 494 | - | - | - | 59 | 176 |
| Mov Cap-2 Maneuver | - | - | - | - | 59 | - |
| Stage 1 | - | - | - | - | 223 | - |
| Stage 2 | - | - | - | - | 499 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 46 | | |
| HCM LOS | | | | E | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 494 | - | - | - | 138 | |
| HCM Lane V/C Ratio | 0.024 | - | - | - | 0.375 | |
| HCM Control Delay (s) | 12.5 | 0 | - | - | 46 | |
| HCM Lane LOS | B | A | - | - | E | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.6 | |

HCM 6th TWSC
 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 19 | 552 | 6 | 1 | 745 | 14 | 13 | 0 | 11 | 38 | 1 | 67 |
| Future Vol, veh/h | 19 | 552 | 6 | 1 | 745 | 14 | 13 | 0 | 11 | 38 | 1 | 67 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 91 | 91 | 91 | 75 | 75 | 75 | 74 | 74 | 74 |
| Heavy Vehicles, % | 6 | 6 | 6 | 2 | 2 | 2 | 8 | 8 | 8 | 1 | 1 | 1 |
| Mvmt Flow | 20 | 575 | 6 | 1 | 819 | 15 | 17 | 0 | 15 | 51 | 1 | 91 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 834 | 0 | 0 | 581 | 0 | 0 | 1490 | 1451 | 575 | 1455 | 1450 | 827 |
| Stage 1 | - | - | - | - | - | - | 615 | 615 | - | 829 | 829 | - |
| Stage 2 | - | - | - | - | - | - | 875 | 836 | - | 626 | 621 | - |
| Critical Hdwy | 4.16 | - | - | 4.12 | - | - | 7.18 | 6.58 | 6.28 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.254 | - | - | 2.218 | - | - | 3.572 | 4.072 | 3.372 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 782 | - | - | 993 | - | - | 99 | 127 | 506 | 108 | 132 | 373 |
| Stage 1 | - | - | - | - | - | - | 468 | 473 | - | 366 | 387 | - |
| Stage 2 | - | - | - | - | - | - | 336 | 374 | - | 474 | 481 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 782 | - | - | 993 | - | - | 72 | 122 | 506 | 102 | 127 | 373 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 72 | 122 | - | 102 | 127 | - |
| Stage 1 | - | - | - | - | - | - | 450 | 455 | - | 352 | 386 | - |
| Stage 2 | - | - | - | - | - | - | 253 | 373 | - | 443 | 463 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 46 | 66.9 |
| HCM LOS | | | E | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 119 | 782 | - | - | 993 | - | - | 189 |
| HCM Lane V/C Ratio | 0.269 | 0.025 | - | - | 0.001 | - | - | 0.758 |
| HCM Control Delay (s) | 46 | 9.7 | 0 | - | 8.6 | 0 | - | 66.9 |
| HCM Lane LOS | E | A | A | - | A | A | - | F |
| HCM 95th %tile Q(veh) | 1 | 0.1 | - | - | 0 | - | - | 5 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 64.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 22 | 573 | 685 | 45 | 188 | 56 |
| Future Vol, veh/h | 22 | 573 | 685 | 45 | 188 | 56 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 90 | 90 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 23 | 610 | 761 | 50 | 216 | 64 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 811 | 0 | 0 | 1442 | 786 |
| Stage 1 | - | - | - | 786 | - |
| Stage 2 | - | - | - | 656 | - |
| Critical Hdwy | 4.15 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 802 | - | - | ~ 145 | 391 |
| Stage 1 | - | - | - | 447 | - |
| Stage 2 | - | - | - | 514 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 802 | - | - | ~ 139 | 391 |
| Mov Cap-2 Maneuver | - | - | - | ~ 139 | - |
| Stage 1 | - | - | - | 428 | - |
| Stage 2 | - | - | - | 514 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 0.4 | 0 | \$ 397.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 802 | - | - | - | 163 |
| HCM Lane V/C Ratio | 0.029 | - | - | - | 1.721 |
| HCM Control Delay (s) | 9.6 | 0 | - | - | \$ 397.5 |
| HCM Lane LOS | A | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 20 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 749 | 10 | 6 | 691 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Future Vol, veh/h | 2 | 749 | 10 | 6 | 691 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 89 | 89 | 89 | 73 | 73 | 73 | 58 | 58 | 58 |
| Heavy Vehicles, % | 4 | 4 | 4 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 2 | 797 | 11 | 7 | 776 | 6 | 25 | 0 | 32 | 9 | 0 | 28 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 782 | 0 | 0 | 808 | 0 | 0 | 1614 | 803 | 1616 | 1605 | 779 | |
| Stage 1 | - | - | - | - | - | - | 807 | 807 | - | 793 | 793 | - |
| Stage 2 | - | - | - | - | - | - | 807 | 796 | - | 823 | 812 | - |
| Critical Hdwy | 4.14 | - | - | 4.11 | - | - | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.209 | - | - | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 |
| Pot Cap-1 Maneuver | 827 | - | - | 822 | - | - | 82 | 104 | 379 | 82 | 104 | 391 |
| Stage 1 | - | - | - | - | - | - | 371 | 390 | - | 378 | 396 | - |
| Stage 2 | - | - | - | - | - | - | 371 | 395 | - | 363 | 388 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 827 | - | - | 822 | - | - | 75 | 102 | 379 | 74 | 102 | 391 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 75 | 102 | - | 74 | 102 | - |
| Stage 1 | - | - | - | - | - | - | 370 | 388 | - | 376 | 390 | - |
| Stage 2 | - | - | - | - | - | - | 340 | 389 | - | 331 | 386 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 0.1 | 48.9 | 27.8 |
| HCM LOS | | | E | D |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 136 | 827 | - | - | 822 | - | - | 194 |
| HCM Lane V/C Ratio | 0.413 | 0.003 | - | - | 0.008 | - | - | 0.187 |
| HCM Control Delay (s) | 48.9 | 9.4 | 0 | - | 9.4 | 0 | - | 27.8 |
| HCM Lane LOS | E | A | A | - | A | A | - | D |
| HCM 95th %tile Q(veh) | 1.8 | 0 | - | - | 0 | - | - | 0.7 |

HCM 6th TWSC

6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 7.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 641 | 728 | 16 | 56 | 44 |
| Future Vol, veh/h | 13 | 641 | 728 | 16 | 56 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 89 | 87 | 68 | 68 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 697 | 818 | 18 | 82 | 65 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 836 | 0 | - | 0 | 1543 | 818 |
| Stage 1 | - | - | - | - | 818 | - |
| Stage 2 | - | - | - | - | 725 | - |
| Critical Hdwy | 4.14 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.236 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 789 | - | - | - | 126 | 376 |
| Stage 1 | - | - | - | - | 434 | - |
| Stage 2 | - | - | - | - | 479 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 789 | - | - | - | 122 | 376 |
| Mov Cap-2 Maneuver | - | - | - | - | 122 | - |
| Stage 1 | - | - | - | - | 421 | - |
| Stage 2 | - | - | - | - | 479 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 86.2 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 789 | - | - | - | 174 | |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.845 | |
| HCM Control Delay (s) | 9.6 | 0 | - | - | 86.2 | |
| HCM Lane LOS | A | A | - | - | F | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 5.9 | |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 698 | 9 | 2 | 722 | 19 | 9 |
| Future Vol, veh/h | 698 | 9 | 2 | 722 | 19 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 83 | 83 | 64 | 64 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 767 | 10 | 2 | 870 | 30 | 14 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 777 | 0 | 1641 | 767 |
| Stage 1 | - | - | - | - | 767 | - |
| Stage 2 | - | - | - | - | 874 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | - | - | 839 | - | 107 | 394 |
| Stage 1 | - | - | - | - | 450 | - |
| Stage 2 | - | - | - | - | 400 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 839 | - | 106 | 394 |
| Mov Cap-2 Maneuver | - | - | - | - | 106 | - |
| Stage 1 | - | - | - | - | 450 | - |
| Stage 2 | - | - | - | - | 398 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0 | 42.4 | | | |
| HCM LOS | | | | | | E |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 139 | - | - | 839 | - | |
| HCM Lane V/C Ratio | 0.315 | - | - | 0.003 | - | |
| HCM Control Delay (s) | 42.4 | - | - | 9.3 | 0 | |
| HCM Lane LOS | E | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1.2 | - | - | 0 | - | |

HCM 6th TWSC
8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 14 | 687 | 661 | 9 | 45 | 54 |
| Future Vol, veh/h | 14 | 687 | 661 | 9 | 45 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 91 | 91 | 81 | 81 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 15 | 747 | 726 | 10 | 56 | 67 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 736 | 0 | - | 0 | 1503 | 726 |
| Stage 1 | - | - | - | - | 726 | - |
| Stage 2 | - | - | - | - | 777 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 856 | - | - | - | 133 | 423 |
| Stage 1 | - | - | - | - | 477 | - |
| Stage 2 | - | - | - | - | 452 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 856 | - | - | - | 129 | 423 |
| Mov Cap-2 Maneuver | - | - | - | - | 129 | - |
| Stage 1 | - | - | - | - | 463 | - |
| Stage 2 | - | - | - | - | 452 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 44.4 | | |
| HCM LOS | | | | E | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 856 | - | - | - | 208 | |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.588 | |
| HCM Control Delay (s) | 9.3 | 0 | - | - | 44.4 | |
| HCM Lane LOS | A | A | - | - | E | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 3.3 | |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 36 | 781 | 4 | 5 | 648 | 9 | 3 | 0 | 6 | 5 | 0 | 108 |
| Future Vol, veh/h | 36 | 781 | 4 | 5 | 648 | 9 | 3 | 0 | 6 | 5 | 0 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 95 | 95 | 95 | 44 | 44 | 44 | 73 | 73 | 73 |
| Heavy Vehicles, % | 4 | 4 | 4 | 2 | 2 | 2 | 14 | 14 | 14 | 1 | 1 | 1 |
| Mvmt Flow | 42 | 908 | 5 | 5 | 682 | 9 | 7 | 0 | 14 | 7 | 0 | 148 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 691 | 0 | 0 | 913 | 0 | 0 | 1766 | 1696 | 911 | 1699 | 1694 | 687 |
| Stage 1 | - | - | - | - | - | - | 995 | 995 | - | 697 | 697 | - |
| Stage 2 | - | - | - | - | - | - | 771 | 701 | - | 1002 | 997 | - |
| Critical Hdwy | 4.14 | - | - | 4.12 | - | - | 7.24 | 6.64 | 6.34 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.218 | - | - | 3.626 | 4.126 | 3.426 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 895 | - | - | 746 | - | - | 61 | 87 | 316 | 73 | 93 | 449 |
| Stage 1 | - | - | - | - | - | - | 280 | 308 | - | 433 | 444 | - |
| Stage 2 | - | - | - | - | - | - | 375 | 423 | - | 293 | 323 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 895 | - | - | 746 | - | - | 38 | 78 | 316 | 64 | 83 | 449 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 38 | 78 | - | 64 | 83 | - |
| Stage 1 | - | - | - | - | - | - | 253 | 279 | - | 392 | 439 | - |
| Stage 2 | - | - | - | - | - | - | 249 | 418 | - | 254 | 292 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----|------|
| HCM Control Delay, s | 0.4 | 0.1 | 55 | 22.8 |
| HCM LOS | | | F | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 92 | 895 | - | - | 746 | - | - | 355 |
| HCM Lane V/C Ratio | 0.222 | 0.047 | - | - | 0.007 | - | - | 0.436 |
| HCM Control Delay (s) | 55 | 9.2 | 0 | - | 9.9 | 0 | - | 22.8 |
| HCM Lane LOS | F | A | A | - | A | A | - | C |
| HCM 95th %tile Q(veh) | 0.8 | 0.1 | - | - | 0 | - | - | 2.1 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020

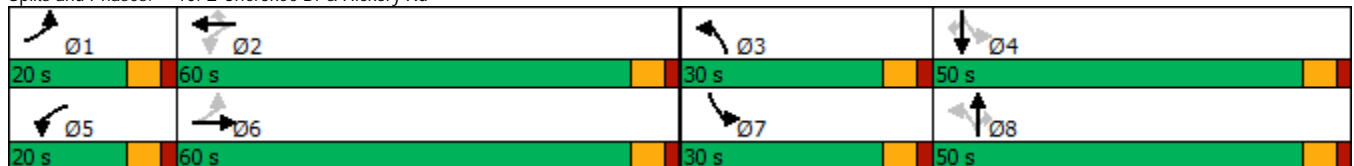


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 329 | 639 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Future Volume (vph) | 329 | 639 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 68.1 | 54.0 | 68.1 | 54.0 | 54.0 | 57.8 | 43.7 | 43.7 | 58.9 | 44.2 | 44.2 |
| Actuated g/C Ratio | 0.45 | 0.36 | 0.45 | 0.36 | 0.36 | 0.38 | 0.29 | 0.29 | 0.39 | 0.29 | 0.29 |
| v/c Ratio | 0.95 | 1.15 | 0.95 | 0.59 | 0.22 | 0.72 | 0.65 | 0.43 | 0.51 | 0.90 | 0.53 |
| Control Delay | 65.0 | 128.4 | 91.8 | 44.1 | 5.8 | 49.8 | 53.9 | 10.0 | 32.8 | 71.1 | 6.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 65.0 | 128.4 | 91.8 | 44.1 | 5.8 | 49.8 | 53.9 | 10.0 | 32.8 | 71.1 | 6.4 |
| LOS | E | F | F | D | A | D | D | A | C | E | A |
| Approach Delay | | 107.8 | | 49.7 | | | 37.8 | | | 40.7 | |
| Approach LOS | | F | | D | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 150.4 | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.15 | |
| Intersection Signal Delay: 62.6 | Intersection LOS: E |
| Intersection Capacity Utilization 96.0% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 329 | 639 | 42 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Future Volume (veh/h) | 329 | 639 | 42 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 374 | 726 | 0 | 198 | 382 | 0 | 160 | 348 | 270 | 172 | 495 | 399 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.91 | 0.91 | 0.91 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 3 | 1 | 1 | 1 |
| Cap, veh/h | 419 | 690 | | 214 | 668 | | 217 | 546 | 463 | 303 | 562 | 476 |
| Arrive On Green | 0.09 | 0.37 | 0.00 | 0.09 | 0.37 | 0.00 | 0.08 | 0.29 | 0.29 | 0.08 | 0.30 | 0.30 |
| Sat Flow, veh/h | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 374 | 726 | 0 | 198 | 382 | 0 | 160 | 348 | 270 | 172 | 495 | 399 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 14.0 | 54.0 | 0.0 | 12.5 | 24.7 | 0.0 | 9.2 | 24.0 | 21.6 | 9.7 | 36.9 | 34.5 |
| Cycle Q Clear(g_c), s | 14.0 | 54.0 | 0.0 | 12.5 | 24.7 | 0.0 | 9.2 | 24.0 | 21.6 | 9.7 | 36.9 | 34.5 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 419 | 690 | | 214 | 668 | | 217 | 546 | 463 | 303 | 562 | 476 |
| V/C Ratio(X) | 0.89 | 1.05 | | 0.93 | 0.57 | | 0.74 | 0.64 | 0.58 | 0.57 | 0.88 | 0.84 |
| Avail Cap(c_a), veh/h | 419 | 690 | | 214 | 668 | | 366 | 553 | 469 | 448 | 562 | 476 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 38.1 | 46.8 | 0.0 | 44.9 | 37.5 | 0.0 | 37.7 | 45.2 | 44.3 | 34.2 | 49.3 | 48.4 |
| Incr Delay (d2), s/veh | 20.7 | 48.8 | 0.0 | 41.5 | 3.5 | 0.0 | 4.9 | 3.4 | 2.9 | 1.7 | 17.7 | 16.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.1 | 34.5 | 0.0 | 6.7 | 11.8 | 0.0 | 4.3 | 11.7 | 8.9 | 4.4 | 20.1 | 15.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 58.8 | 95.5 | 0.0 | 86.4 | 41.0 | 0.0 | 42.5 | 48.6 | 47.2 | 35.9 | 67.0 | 64.4 |
| LnGrp LOS | E | F | | F | D | | D | D | D | D | E | E |
| Approach Vol, veh/h | | 1100 | A | | 580 | A | | 778 | | | 1066 | |
| Approach Delay, s/veh | | 83.0 | | | 56.5 | | | 46.9 | | | 61.0 | |
| Approach LOS | | F | | | E | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 17.5 | 50.0 | 20.0 | 60.0 | 18.1 | 49.4 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.0 | 26.7 | 11.2 | 38.9 | 14.5 | 56.0 | 11.7 | 26.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.7 | 0.3 | 3.3 | 0.0 | 0.0 | 0.3 | 5.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 64.0 |
| HCM 6th LOS | E |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 4.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 131 | 111 | 29 | 204 | 476 | 81 |
| Future Vol, veh/h | 131 | 111 | 29 | 204 | 476 | 81 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 71 | 71 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 8 | 8 |
| Mvmt Flow | 144 | 122 | 41 | 287 | 523 | 89 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 937 | 568 | 612 | 0 | 0 |
| Stage 1 | 568 | - | - | - | - |
| Stage 2 | 369 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.19 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.281 | - | - |
| Pot Cap-1 Maneuver | 295 | 524 | 934 | - | - |
| Stage 1 | 569 | - | - | - | - |
| Stage 2 | 702 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 280 | 524 | 934 | - | - |
| Mov Cap-2 Maneuver | 280 | - | - | - | - |
| Stage 1 | 539 | - | - | - | - |
| Stage 2 | 702 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.1 | 1.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 934 | - | 517 | - | - |
| HCM Lane V/C Ratio | 0.044 | - | 0.514 | - | - |
| HCM Control Delay (s) | 9 | 0 | 19.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 2.9 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 312 | 527 | 0 | 1 | 49 |
| Future Vol, veh/h | 13 | 312 | 527 | 0 | 1 | 49 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 94 | 94 | 75 | 75 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 15 | 371 | 561 | 0 | 1 | 65 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 561 | 0 | - | 0 | 962 | 561 |
| Stage 1 | - | - | - | - | 561 | - |
| Stage 2 | - | - | - | - | 401 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1010 | - | - | - | 283 | 525 |
| Stage 1 | - | - | - | - | 569 | - |
| Stage 2 | - | - | - | - | 674 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1010 | - | - | - | 278 | 525 |
| Mov Cap-2 Maneuver | - | - | - | - | 278 | - |
| Stage 1 | - | - | - | - | 558 | - |
| Stage 2 | - | - | - | - | 674 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.3 | 0 | | 13 | | |
| HCM LOS | | | | B | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 1010 | - | - | - | 516 | |
| HCM Lane V/C Ratio | 0.015 | - | - | - | 0.129 | |
| HCM Control Delay (s) | 8.6 | 0 | - | - | 13 | |
| HCM Lane LOS | A | A | - | - | B | |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.4 | |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 20.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 196 | 0 | 0 | 0 | 0 | 4 | 0 | 320 | 5 | 1 | 516 | 140 |
| Future Vol, veh/h | 196 | 0 | 0 | 0 | 0 | 4 | 0 | 320 | 5 | 1 | 516 | 140 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 75 | 75 | 75 | 77 | 77 | 77 | 95 | 95 | 95 |
| Heavy Vehicles, % | 4 | 4 | 4 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 |
| Mvmt Flow | 215 | 0 | 0 | 0 | 0 | 5 | 0 | 416 | 6 | 1 | 543 | 147 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1041 | 1041 | 617 | 1038 | 1111 | 419 | 690 | 0 | 0 | 422 | 0 | 0 |
| Stage 1 | 619 | 619 | - | 419 | 419 | - | - | - | - | - | - | - |
| Stage 2 | 422 | 422 | - | 619 | 692 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.14 | 6.54 | 6.24 | 7.1 | 6.5 | 6.2 | 4.13 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.036 | 3.336 | 3.5 | 4 | 3.3 | 2.227 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 206 | 228 | 486 | 211 | 211 | 638 | 900 | - | - | 1137 | - | - |
| Stage 1 | 473 | 477 | - | 616 | 593 | - | - | - | - | - | - | - |
| Stage 2 | 605 | 585 | - | 480 | 448 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 204 | 228 | 486 | 211 | 211 | 638 | 900 | - | - | 1137 | - | - |
| Mov Cap-2 Maneuver | ~ 204 | 228 | - | 211 | 211 | - | - | - | - | - | - | - |
| Stage 1 | 473 | 477 | - | 616 | 593 | - | - | - | - | - | - | - |
| Stage 2 | 600 | 585 | - | 480 | 448 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 127.6 | | | 10.7 | | | 0 | | | 0 | | |
| HCM LOS | F | | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 900 | - | - | 204 | 638 | 1137 | - | - |
| HCM Lane V/C Ratio | - | - | - | 1.056 | 0.008 | 0.001 | - | - |
| HCM Control Delay (s) | 0 | - | - | 127.6 | 10.7 | 8.2 | 0 | - |
| HCM Lane LOS | A | - | - | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 9.7 | 0 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020

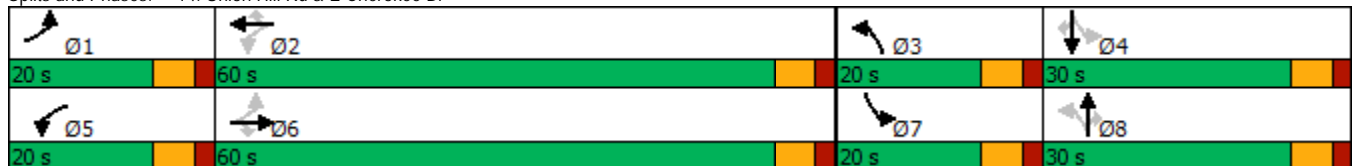


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Future Volume (vph) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 61.7 | 54.2 | 54.2 | 68.4 | 59.7 | 59.7 | 24.4 | 15.6 | 15.6 | 34.3 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.52 | 0.46 | 0.46 | 0.58 | 0.50 | 0.50 | 0.21 | 0.13 | 0.13 | 0.29 | 0.20 | 0.20 |
| v/c Ratio | 0.20 | 0.53 | 0.15 | 0.32 | 0.65 | 0.25 | 0.27 | 0.56 | 0.47 | 0.87 | 0.68 | 0.28 |
| Control Delay | 12.8 | 27.1 | 3.9 | 13.3 | 27.9 | 7.2 | 33.2 | 57.1 | 11.4 | 62.9 | 57.0 | 7.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.8 | 27.1 | 3.9 | 13.3 | 27.9 | 7.2 | 33.2 | 57.1 | 11.4 | 62.9 | 57.0 | 7.1 |
| LOS | B | C | A | B | C | A | C | E | B | E | E | A |
| Approach Delay | | 21.1 | | | 20.9 | | | 32.2 | | | 51.0 | |
| Approach LOS | | C | | | C | | | C | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 118.3 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.87 | |
| Intersection Signal Delay: 29.9 | Intersection LOS: C |
| Intersection Capacity Utilization 67.2% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Future Volume (veh/h) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 | 1885 | 1885 | 1885 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h | 68 | 442 | 0 | 145 | 590 | 0 | 71 | 138 | 0 | 281 | 237 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.82 | 0.82 | 0.82 | 0.66 | 0.66 | 0.66 | 0.75 | 0.75 | 0.75 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 1 | 8 | 8 | 8 |
| Cap, veh/h | 365 | 914 | | 482 | 955 | | 208 | 178 | | 312 | 312 | |
| Arrive On Green | 0.03 | 0.50 | 0.00 | 0.06 | 0.52 | 0.00 | 0.05 | 0.09 | 0.00 | 0.13 | 0.18 | 0.00 |
| Sat Flow, veh/h | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Grp Volume(v), veh/h | 68 | 442 | 0 | 145 | 590 | 0 | 71 | 138 | 0 | 281 | 237 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Q Serve(g_s), s | 2.1 | 17.3 | 0.0 | 4.4 | 24.8 | 0.0 | 3.8 | 7.8 | 0.0 | 14.0 | 13.8 | 0.0 |
| Cycle Q Clear(g_c), s | 2.1 | 17.3 | 0.0 | 4.4 | 24.8 | 0.0 | 3.8 | 7.8 | 0.0 | 14.0 | 13.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 365 | 914 | | 482 | 955 | | 208 | 178 | | 312 | 312 | |
| V/C Ratio(X) | 0.19 | 0.48 | | 0.30 | 0.62 | | 0.34 | 0.78 | | 0.90 | 0.76 | |
| Avail Cap(c_a), veh/h | 532 | 914 | | 602 | 955 | | 353 | 416 | | 312 | 393 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 14.9 | 18.1 | 0.0 | 13.3 | 18.3 | 0.0 | 41.8 | 48.1 | 0.0 | 39.3 | 42.7 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 1.8 | 0.0 | 0.3 | 3.0 | 0.0 | 1.0 | 7.1 | 0.0 | 27.6 | 6.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.8 | 7.2 | 0.0 | 1.6 | 10.2 | 0.0 | 1.7 | 3.9 | 0.0 | 8.9 | 6.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.2 | 20.0 | 0.0 | 13.7 | 21.3 | 0.0 | 42.7 | 55.2 | 0.0 | 66.9 | 49.2 | 0.0 |
| LnGrp LOS | B | B | | B | C | | D | E | | E | D | |
| Approach Vol, veh/h | | 510 | A | | 735 | A | | 209 | A | | 518 | A |
| Approach Delay, s/veh | | 19.3 | | | 19.8 | | | 51.0 | | | 58.8 | |
| Approach LOS | | B | | | B | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.6 | 62.9 | 11.2 | 25.0 | 12.5 | 60.0 | 20.0 | 16.3 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.1 | 26.8 | 5.8 | 15.8 | 6.4 | 19.3 | 16.0 | 9.8 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.7 | 0.1 | 0.7 | 0.2 | 2.6 | 0.0 | 0.5 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 33.2 | | | | | | | | | | | |
| HCM 6th LOS | C | | | | | | | | | | | |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 15 | 9 | 557 | 544 | 1 |
| Future Vol, veh/h | 8 | 15 | 9 | 557 | 544 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 50 | 50 | 77 | 77 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 16 | 30 | 12 | 723 | 640 | 1 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1388 | 641 | 641 | 0 | 0 |
| Stage 1 | 641 | - | - | - | - |
| Stage 2 | 747 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 159 | 478 | 934 | - | - |
| Stage 1 | 528 | - | - | - | - |
| Stage 2 | 472 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 156 | 478 | 934 | - | - |
| Mov Cap-2 Maneuver | 156 | - | - | - | - |
| Stage 1 | 517 | - | - | - | - |
| Stage 2 | 472 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.5 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 934 | - | 278 | - | - |
| HCM Lane V/C Ratio | 0.013 | - | 0.165 | - | - |
| HCM Control Delay (s) | 8.9 | 0 | 20.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.6 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | W | | W | |
| Traffic Vol, veh/h | 47 | 5 | 9 | 576 | 512 | 38 |
| Future Vol, veh/h | 47 | 5 | 9 | 576 | 512 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 73 | 73 | 80 | 80 | 87 | 87 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 64 | 7 | 11 | 720 | 589 | 44 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1353 | 611 | 633 | 0 | 0 |
| Stage 1 | 611 | - | - | - | - |
| Stage 2 | 742 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 165 | 494 | 940 | - | - |
| Stage 1 | 542 | - | - | - | - |
| Stage 2 | 471 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 162 | 494 | 940 | - | - |
| Mov Cap-2 Maneuver | 162 | - | - | - | - |
| Stage 1 | 531 | - | - | - | - |
| Stage 2 | 471 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 39.7 | 0.1 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 940 | - | 173 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.412 | - | - |
| HCM Control Delay (s) | 8.9 | 0 | 39.7 | - | - |
| HCM Lane LOS | A | A | E | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.8 | - | - |

HCM 6th TWSC
 17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 603 | 22 | 4 | 525 | 20 | 3 |
| Future Vol, veh/h | 603 | 22 | 4 | 525 | 20 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 84 | 84 | 86 | 86 | 64 | 64 |
| Heavy Vehicles, % | 3 | 3 | 6 | 6 | 0 | 0 |
| Mvmt Flow | 718 | 26 | 5 | 610 | 31 | 5 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 744 | 0 |
| Stage 1 | - | - | - | 731 |
| Stage 2 | - | - | - | 620 |
| Critical Hdwy | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | - | - | 846 | - |
| Stage 1 | - | - | - | 480 |
| Stage 2 | - | - | - | 540 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 846 | - |
| Mov Cap-2 Maneuver | - | - | - | 165 |
| Stage 1 | - | - | - | 480 |
| Stage 2 | - | - | - | 535 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 30.1 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 179 | - | - | 846 | - |
| HCM Lane V/C Ratio | 0.201 | - | - | 0.005 | - |
| HCM Control Delay (s) | 30.1 | - | - | 9.3 | 0 |
| HCM Lane LOS | D | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 4 | 69 | 3 | 518 | 668 | 3 |
| Future Vol, veh/h | 4 | 69 | 3 | 518 | 668 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 65 | 65 | 93 | 93 | 77 | 77 |
| Heavy Vehicles, % | 5 | 5 | 4 | 4 | 3 | 3 |
| Mvmt Flow | 6 | 106 | 3 | 557 | 868 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1433 | 870 | 872 | 0 | 0 |
| Stage 1 | 870 | - | - | - | - |
| Stage 2 | 563 | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 145 | 347 | 765 | - | - |
| Stage 1 | 405 | - | - | - | - |
| Stage 2 | 564 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 144 | 347 | 765 | - | - |
| Mov Cap-2 Maneuver | 144 | - | - | - | - |
| Stage 1 | 403 | - | - | - | - |
| Stage 2 | 564 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 765 | - | 322 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.349 | - | - |
| HCM Control Delay (s) | 9.7 | 0 | 22.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.5 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 38.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 148 | 117 | 325 | 183 | 115 | 428 |
| Future Vol, veh/h | 148 | 117 | 325 | 183 | 115 | 428 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 61 | 61 | 86 | 86 | 84 | 84 |
| Heavy Vehicles, % | 0 | 0 | 3 | 3 | 1 | 1 |
| Mvmt Flow | 243 | 192 | 378 | 213 | 137 | 510 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1162 | 378 | 0 | 0 | 591 |
| Stage 1 | 378 | - | - | - | - |
| Stage 2 | 784 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.11 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.209 |
| Pot Cap-1 Maneuver | ~ 218 | 673 | - | - | 990 |
| Stage 1 | 697 | - | - | - | - |
| Stage 2 | 453 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 176 | 673 | - | - | 990 |
| Mov Cap-2 Maneuver | ~ 176 | - | - | - | - |
| Stage 1 | 697 | - | - | - | - |
| Stage 2 | 366 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 146.1 | 0 | 2 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 176 | 673 | 990 | - |
| HCM Lane V/C Ratio | - | - | 1.379 | 0.285 | 0.138 | - |
| HCM Control Delay (s) | - | - | 251.8 | 12.5 | 9.2 | 0 |
| HCM Lane LOS | - | - | F | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 14.6 | 1.2 | 0.5 | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Future Volume (vph) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 26.0 | 68.0 | 68.0 | 16.0 | 58.0 | 58.0 | 17.0 | 33.0 | 33.0 | 13.0 | 29.0 | 29.0 |
| Total Split (%) | 20.0% | 52.3% | 52.3% | 12.3% | 44.6% | 44.6% | 13.1% | 25.4% | 25.4% | 10.0% | 22.3% | 22.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 69.6 | 62.5 | 62.5 | 74.1 | 69.2 | 69.2 | 37.6 | 27.4 | 27.4 | 30.0 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.57 | 0.53 | 0.53 | 0.29 | 0.21 | 0.21 | 0.23 | 0.18 | 0.18 |
| v/c Ratio | 0.11 | 0.80 | 0.21 | 0.41 | 0.73 | 0.11 | 0.86 | 0.49 | 0.37 | 0.48 | 0.79 | 0.14 |
| Control Delay | 12.0 | 37.5 | 5.8 | 16.3 | 30.7 | 0.3 | 70.6 | 50.4 | 7.3 | 42.5 | 69.4 | 0.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.0 | 37.5 | 5.8 | 16.3 | 30.7 | 0.3 | 70.6 | 50.4 | 7.3 | 42.5 | 69.4 | 0.7 |
| LOS | B | D | A | B | C | A | E | D | A | D | E | A |
| Approach Delay | | 30.5 | | | 25.7 | | | 44.1 | | | 52.7 | |
| Approach LOS | | C | | | C | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 129.7 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.86 | |
| Intersection Signal Delay: 35.3 | Intersection LOS: D |
| Intersection Capacity Utilization 81.3% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Future Volume (veh/h) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1767 | 1767 | 1767 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 34 | 675 | 167 | 109 | 676 | 0 | 196 | 187 | 173 | 131 | 259 | 58 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 9 | 9 | 9 | 10 | 10 | 10 | 6 | 6 | 6 | 5 | 5 | 5 |
| Cap, veh/h | 268 | 857 | 726 | 259 | 883 | 0 | 248 | 385 | 326 | 272 | 332 | 281 |
| Arrive On Green | 0.04 | 0.49 | 0.49 | 0.06 | 0.50 | 0.00 | 0.08 | 0.21 | 0.21 | 0.05 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 34 | 675 | 167 | 109 | 676 | 0 | 196 | 187 | 173 | 131 | 259 | 58 |
| Grp Sat Flow(s),veh/h/ln | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 1.3 | 41.0 | 8.3 | 4.1 | 40.2 | 0.0 | 10.8 | 11.7 | 12.9 | 7.0 | 17.4 | 4.1 |
| Cycle Q Clear(g_c), s | 1.3 | 41.0 | 8.3 | 4.1 | 40.2 | 0.0 | 10.8 | 11.7 | 12.9 | 7.0 | 17.4 | 4.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 268 | 857 | 726 | 259 | 883 | | 248 | 385 | 326 | 272 | 332 | 281 |
| V/C Ratio(X) | 0.13 | 0.79 | 0.23 | 0.42 | 0.77 | | 0.79 | 0.49 | 0.53 | 0.48 | 0.78 | 0.21 |
| Avail Cap(c_a), veh/h | 450 | 857 | 726 | 280 | 883 | | 248 | 385 | 326 | 272 | 332 | 281 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 20.4 | 27.6 | 19.2 | 22.2 | 25.8 | 0.0 | 42.4 | 44.5 | 45.0 | 41.8 | 50.3 | 44.8 |
| Incr Delay (d2), s/veh | 0.2 | 7.2 | 0.7 | 1.1 | 6.3 | 0.0 | 15.7 | 4.3 | 6.0 | 1.3 | 16.6 | 1.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 18.0 | 2.9 | 1.6 | 17.2 | 0.0 | 6.1 | 5.6 | 5.3 | 3.5 | 9.3 | 1.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 20.6 | 34.9 | 20.0 | 23.2 | 32.1 | 0.0 | 58.1 | 48.9 | 51.1 | 43.2 | 66.8 | 46.5 |
| LnGrp LOS | C | C | B | C | C | | E | D | D | D | E | D |
| Approach Vol, veh/h | | 876 | | | 785 | A | | 556 | | | 448 | |
| Approach Delay, s/veh | | 31.5 | | | 30.9 | | | 52.8 | | | 57.3 | |
| Approach LOS | | C | | | C | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.0 | 70.8 | 17.0 | 29.0 | 14.4 | 68.4 | 13.0 | 33.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 19.6 | 52.1 | * 11 | * 23 | 9.4 | * 63 | 7.0 | * 27 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 42.2 | 12.8 | 19.4 | 6.1 | 43.0 | 9.0 | 14.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.0 | 0.0 | 0.5 | 0.1 | 4.7 | 0.0 | 1.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 40.1 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 453 | 400 | 194 | 734 | 565 | 174 | 244 | 143 | 169 | 144 |
| Average Queue (ft) | 84 | 261 | 138 | 128 | 724 | 181 | 127 | 90 | 37 | 60 | 38 |
| 95th Queue (ft) | 186 | 392 | 259 | 225 | 729 | 582 | 188 | 196 | 91 | 120 | 86 |
| Link Distance (ft) | | 929 | 929 | | 719 | | | 620 | | 144 | |
| Upstream Blk Time (%) | | | | | 35 | | | | 0 | 0 | 0 |
| Queuing Penalty (veh) | | | | | 402 | | | | 0 | 0 | 0 |
| Storage Bay Dist (ft) | 315 | | | 145 | | 340 | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 5 | | 2 | 58 | | 9 | 2 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 6 | | 20 | 199 | | 12 | 4 | 0 | 0 | 0 |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | WB | B60 | SB |
|-----------------------|-----|------|------|-----|
| Directions Served | LT | TR | T | LR |
| Maximum Queue (ft) | 466 | 1581 | 834 | 391 |
| Average Queue (ft) | 68 | 1148 | 161 | 276 |
| 95th Queue (ft) | 299 | 1911 | 600 | 474 |
| Link Distance (ft) | 719 | 1487 | 2245 | 352 |
| Upstream Blk Time (%) | | 27 | | 58 |
| Queuing Penalty (veh) | | 226 | | 0 |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LT | LTR | LTR | LTR |
| Maximum Queue (ft) | 72 | 27 | 82 | 95 |
| Average Queue (ft) | 8 | 1 | 16 | 42 |
| 95th Queue (ft) | 38 | 9 | 46 | 72 |
| Link Distance (ft) | 1434 | 3846 | 517 | 824 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | 0 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 317 | 594 |
| Average Queue (ft) | 28 | 292 |
| 95th Queue (ft) | 145 | 527 |
| Link Distance (ft) | 3846 | 655 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 64 | 318 | 42 | 43 |
| Average Queue (ft) | 2 | 27 | 18 | 12 |
| 95th Queue (ft) | 22 | 155 | 37 | 33 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 63 |
| Average Queue (ft) | 8 | 30 |
| 95th Queue (ft) | 31 | 59 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 54 | 47 |
| Average Queue (ft) | 2 | 23 |
| 95th Queue (ft) | 18 | 49 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 109 | 72 |
| Average Queue (ft) | 13 | 40 |
| 95th Queue (ft) | 55 | 60 |
| Link Distance (ft) | 2510 | 472 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | NB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 305 | 22 | 107 |
| Average Queue (ft) | 48 | 5 | 34 |
| 95th Queue (ft) | 169 | 20 | 53 |
| Link Distance (ft) | 4030 | 637 | 210 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 938 | 350 | 560 | 225 | 506 | 420 | 170 | 1428 | 525 |
| Average Queue (ft) | 331 | 895 | 116 | 208 | 115 | 244 | 109 | 133 | 855 | 348 |
| 95th Queue (ft) | 494 | 1029 | 220 | 363 | 227 | 435 | 230 | 211 | 1585 | 677 |
| Link Distance (ft) | | 904 | | 677 | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | 54 | | | | | | | 5 | |
| Queuing Penalty (veh) | | 0 | | | | | | | 0 | |
| Storage Bay Dist (ft) | 335 | | 300 | | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 3 | 58 | | 2 | 0 | 29 | 0 | 15 | 61 | 0 |
| Queuing Penalty (veh) | 21 | 189 | | 5 | 2 | 115 | 0 | 117 | 298 | 0 |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 148 | 53 | 95 |
| Average Queue (ft) | 50 | 19 | 0 |
| 95th Queue (ft) | 106 | 53 | 0 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 59 |
| Average Queue (ft) | 2 | 20 |
| 95th Queue (ft) | 18 | 42 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB | SB |
|-----------------------|-----|-----|------|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 174 | 30 | 24 |
| Average Queue (ft) | 68 | 3 | 1 |
| 95th Queue (ft) | 134 | 18 | 8 |
| Link Distance (ft) | 614 | 581 | 3762 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | WB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | L | T | R | L | T | L | T | R |
| Maximum Queue (ft) | 72 | 249 | 244 | 246 | 240 | 96 | 133 | 239 | 341 | 239 |
| Average Queue (ft) | 25 | 132 | 50 | 133 | 9 | 38 | 67 | 128 | 138 | 9 |
| 95th Queue (ft) | 55 | 220 | 122 | 219 | 82 | 81 | 113 | 217 | 255 | 82 |
| Link Distance (ft) | | 3762 | | 1100 | | | 626 | | 702 | |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 195 | | 195 | 185 | | 190 | | 190 |
| Storage Blk Time (%) | | 3 | | 2 | | | | 5 | 3 | |
| Queuing Penalty (veh) | | 6 | | 7 | | | | 13 | 9 | |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 52 | 72 |
| Average Queue (ft) | 17 | 5 |
| 95th Queue (ft) | 45 | 31 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 63 | 75 |
| Average Queue (ft) | 25 | 1 |
| 95th Queue (ft) | 49 | 10 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 478 | 48 |
| Average Queue (ft) | 21 | 17 |
| 95th Queue (ft) | 168 | 43 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 94 |
| Average Queue (ft) | 47 |
| 95th Queue (ft) | 83 |
| Link Distance (ft) | 663 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | NB | SB |
|-----------------------|-----|-----|------|
| Directions Served | L | R | LT |
| Maximum Queue (ft) | 224 | 46 | 97 |
| Average Queue (ft) | 55 | 2 | 37 |
| 95th Queue (ft) | 123 | 18 | 89 |
| Link Distance (ft) | 484 | | 1053 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 200 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 229 | 589 | 310 | 259 | 584 | 220 | 192 | 276 | 193 | 269 | 429 | 100 |
| Average Queue (ft) | 23 | 303 | 116 | 110 | 301 | 78 | 114 | 116 | 68 | 82 | 219 | 43 |
| 95th Queue (ft) | 94 | 502 | 317 | 243 | 497 | 252 | 170 | 207 | 138 | 180 | 365 | 115 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | 788 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 23 | | 0 | 19 | | | 1 | | | 66 | 3 |
| Queuing Penalty (veh) | | 42 | | 0 | 36 | | | 4 | | | 109 | 10 |

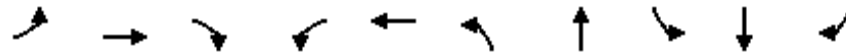
Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 1853 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 17.0 | 24.2 | 24.2 |
| Total Split (s) | 15.0 | 78.0 | 78.0 | 15.0 | 78.0 | 20.0 | 37.0 | 20.0 | 37.0 | 37.0 |
| Total Split (%) | 10.0% | 52.0% | 52.0% | 10.0% | 52.0% | 13.3% | 24.7% | 13.3% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 78.1 | 71.1 | 71.1 | 84.3 | 78.4 | 46.0 | 30.8 | 44.6 | 30.8 | 30.8 |
| Actuated g/C Ratio | 0.52 | 0.47 | 0.47 | 0.56 | 0.52 | 0.31 | 0.21 | 0.30 | 0.21 | 0.21 |
| v/c Ratio | 0.17 | 1.14 | 0.53 | 1.07 | 1.06 | 1.36 | 0.43 | 0.05 | 0.04 | 0.05 |
| Control Delay | 16.9 | 112.5 | 15.4 | 129.1 | 82.5 | 212.2 | 10.0 | 33.8 | 48.2 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 16.9 | 112.5 | 15.4 | 129.1 | 82.5 | 212.2 | 10.0 | 33.8 | 48.2 | 0.2 |
| LOS | B | F | B | F | F | F | A | C | D | A |
| Approach Delay | | 81.1 | | | 88.8 | | 161.9 | | 23.5 | |
| Approach LOS | | F | | | F | | F | | C | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Natural Cycle: 180 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.36 | |
| Intersection Signal Delay: 101.9 | Intersection LOS: F |
| Intersection Capacity Utilization 113.4% | ICU Level of Service H |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| | | | |
|------------|------------|------------|------------|
| Ø1 15 s | Ø2 78 s | Ø3 20 s | Ø4 37 s |
| Ø5 15 s | Ø6 78 s | Ø7 20 s | Ø8 37 s |

HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 83 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| Arrive On Green | 0.02 | 0.47 | 0.47 | 0.06 | 0.51 | 0.00 | 0.10 | 0.21 | 0.00 | 0.09 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 0.9 | 71.1 | 32.2 | 8.8 | 77.0 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.9 | 1.7 |
| Cycle Q Clear(g_c), s | 0.9 | 71.1 | 32.2 | 8.8 | 77.0 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.9 | 1.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 83 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| V/C Ratio(X) | 0.25 | 1.13 | 0.61 | 1.06 | 1.08 | 0.00 | 1.28 | 0.02 | | 0.03 | 0.04 | 0.07 |
| Avail Cap(c_a), veh/h | 153 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.3 | 39.5 | 29.2 | 47.7 | 36.5 | 0.0 | 53.4 | 47.6 | 0.0 | 37.4 | 47.7 | 48.0 |
| Incr Delay (d2), s/veh | 1.6 | 74.5 | 1.4 | 90.4 | 52.9 | 0.0 | 139.4 | 0.1 | 0.0 | 0.1 | 0.2 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 49.7 | 12.6 | 9.6 | 47.1 | 0.0 | 31.2 | 0.3 | 0.0 | 0.4 | 0.4 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.9 | 113.9 | 30.7 | 138.1 | 89.4 | 0.0 | 192.8 | 47.7 | 0.0 | 37.5 | 47.9 | 48.4 |
| LnGrp LOS | D | F | C | F | F | A | F | D | | D | D | D |
| Approach Vol, veh/h | 1498 | | | 1198 | | | 643 | | | A | | |
| Approach Delay, s/veh | 87.1 | | | 96.0 | | | 191.0 | | | 44.9 | | |
| Approach LOS | F | | | F | | | F | | | D | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 83.9 | 20.0 | 37.0 | 15.0 | 78.0 | 20.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 71.1 | 14.5 | * 31 | * 8.8 | 71.1 | * 14 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.9 | 79.0 | 16.5 | 3.7 | 10.8 | 73.1 | 2.9 | 2.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 109.3 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 28 | 1119 | 984 | 7 | 1 | 23 |
| Future Vol, veh/h | 28 | 1119 | 984 | 7 | 1 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 87 | 87 | 60 | 60 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 32 | 1272 | 1131 | 8 | 2 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|------|------|
| Conflicting Flow All | 1139 | 0 | 0 | 2471 | 1135 |
| Stage 1 | - | - | - | 1135 | - |
| Stage 2 | - | - | - | 1336 | - |
| Critical Hdwy | 4.11 | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.209 | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 617 | - | - | 34 | 249 |
| Stage 1 | - | - | - | 309 | - |
| Stage 2 | - | - | - | 248 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 617 | - | - | 28 | 249 |
| Mov Cap-2 Maneuver | - | - | - | 28 | - |
| Stage 1 | - | - | - | 254 | - |
| Stage 2 | - | - | - | 248 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 29.4 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 617 | - | - | - | 187 |
| HCM Lane V/C Ratio | 0.052 | - | - | - | 0.214 |
| HCM Control Delay (s) | 11.2 | 0 | - | - | 29.4 |
| HCM Lane LOS | B | A | - | - | D |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.8 |

HCM 6th TWSC
 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 59 | 771 | 17 | 5 | 840 | 20 | 8 | 0 | 2 | 8 | 4 | 36 |
| Future Vol, veh/h | 59 | 771 | 17 | 5 | 840 | 20 | 8 | 0 | 2 | 8 | 4 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 91 | 91 | 91 | 50 | 50 | 50 | 93 | 93 | 93 |
| Heavy Vehicles, % | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 67 | 876 | 19 | 5 | 923 | 22 | 16 | 0 | 4 | 9 | 4 | 39 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|-----|
| Conflicting Flow All | 945 | 0 | 0 | 895 | 0 | 0 | 1976 | 876 | 1966 | 1973 | 934 | |
| Stage 1 | - | - | - | - | - | - | 1010 | 1010 | - | 944 | 944 | - |
| Stage 2 | - | - | - | - | - | - | 966 | 955 | - | 1022 | 1029 | - |
| Critical Hdwy | 4.11 | - | - | 4.13 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.227 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 730 | - | - | 754 | - | - | 47 | 64 | 351 | 48 | 63 | 325 |
| Stage 1 | - | - | - | - | - | - | 292 | 320 | - | 317 | 344 | - |
| Stage 2 | - | - | - | - | - | - | 309 | 339 | - | 287 | 314 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 730 | - | - | 754 | - | - | 33 | 52 | 351 | 40 | 51 | 325 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 33 | 52 | - | 40 | 51 | - |
| Stage 1 | - | - | - | - | - | - | 239 | 261 | - | 259 | 339 | - |
| Stage 2 | - | - | - | - | - | - | 265 | 334 | - | 232 | 257 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-------|------|
| HCM Control Delay, s | 0.7 | 0.1 | 163.9 | 53.9 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 40 | 730 | - | - | 754 | - | - | 123 |
| HCM Lane V/C Ratio | 0.5 | 0.092 | - | - | 0.007 | - | - | 0.42 |
| HCM Control Delay (s) | 163.9 | 10.4 | 0 | - | 9.8 | 0 | - | 53.9 |
| HCM Lane LOS | F | B | A | - | A | A | - | F |
| HCM 95th %tile Q(veh) | 1.8 | 0.3 | - | - | 0 | - | - | 1.8 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 17.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 90 | 712 | 789 | 111 | 59 | 42 |
| Future Vol, veh/h | 90 | 712 | 789 | 111 | 59 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 93 | 93 | 82 | 82 |
| Heavy Vehicles, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Mvmt Flow | 95 | 749 | 848 | 119 | 72 | 51 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 967 | 0 | 0 | 1847 | 908 |
| Stage 1 | - | - | - | 908 | - |
| Stage 2 | - | - | - | 939 | - |
| Critical Hdwy | 4.11 | - | - | 6.45 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | 5.45 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.45 | - |
| Follow-up Hdwy | 2.209 | - | - | 3.545 | 3.345 |
| Pot Cap-1 Maneuver | 716 | - | - | 81 | 329 |
| Stage 1 | - | - | - | 389 | - |
| Stage 2 | - | - | - | 376 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 716 | - | - | ~ 63 | 329 |
| Mov Cap-2 Maneuver | - | - | - | ~ 63 | - |
| Stage 1 | - | - | - | 301 | - |
| Stage 2 | - | - | - | 376 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.2 | 0 | 272.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 716 | - | - | - | 95 |
| HCM Lane V/C Ratio | 0.132 | - | - | - | 1.297 |
| HCM Control Delay (s) | 10.8 | 0 | - | - | 272.6 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.5 | - | - | - | 8.8 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 19 | 739 | 37 | 21 | 831 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Future Vol, veh/h | 19 | 739 | 37 | 21 | 831 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 91 | 91 | 91 | 73 | 73 | 73 | 50 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 22 | 869 | 44 | 23 | 913 | 5 | 37 | 3 | 12 | 6 | 0 | 14 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|------|------|
| Conflicting Flow All | 918 | 0 | 0 | 913 | 0 | 0 | 1904 | 1899 | 891 | 1905 | 1919 | 916 |
| Stage 1 | - | - | - | - | - | - | 935 | 935 | - | 962 | 962 | - |
| Stage 2 | - | - | - | - | - | - | 969 | 964 | - | 943 | 957 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.13 | 6.53 | 6.23 | 7.2 | 6.6 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.527 | 4.027 | 3.327 | 3.59 | 4.09 | 3.39 |
| Pot Cap-1 Maneuver | 747 | - | - | 746 | - | - | 52 | 69 | 340 | 50 | 64 | 319 |
| Stage 1 | - | - | - | - | - | - | 317 | 343 | - | 297 | 324 | - |
| Stage 2 | - | - | - | - | - | - | 304 | 332 | - | 305 | 326 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 747 | - | - | 746 | - | - | 45 | 61 | 340 | 42 | 56 | 319 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 45 | 61 | - | 42 | 56 | - |
| Stage 1 | - | - | - | - | - | - | 298 | 322 | - | 279 | 304 | - |
| Stage 2 | - | - | - | - | - | - | 272 | 311 | - | 274 | 306 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-----|------|
| HCM Control Delay, s | 0.2 | 0.2 | 204 | 46.2 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 58 | 747 | - | - | 746 | - | - | 107 |
| HCM Lane V/C Ratio | 0.897 | 0.03 | - | - | 0.031 | - | - | 0.187 |
| HCM Control Delay (s) | 204 | 10 | 0 | - | 10 | 0 | - | 46.2 |
| HCM Lane LOS | F | A | A | - | A | A | - | E |
| HCM 95th %tile Q(veh) | 4.1 | 0.1 | - | - | 0.1 | - | - | 0.7 |

HCM 6th TWSC

6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | ↕ | ↕ | ↕ |
| Traffic Vol, veh/h | 54 | 699 | 723 | 57 | 28 | 43 |
| Future Vol, veh/h | 54 | 699 | 723 | 57 | 28 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 88 | 88 | 71 | 71 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 58 | 752 | 822 | 65 | 39 | 61 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 887 | 0 | 0 | 1690 | 822 |
| Stage 1 | - | - | - | 822 | - |
| Stage 2 | - | - | - | 868 | - |
| Critical Hdwy | 4.11 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.209 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 768 | - | - | 102 | 372 |
| Stage 1 | - | - | - | 430 | - |
| Stage 2 | - | - | - | 409 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 768 | - | - | 89 | 372 |
| Mov Cap-2 Maneuver | - | - | - | 89 | - |
| Stage 1 | - | - | - | 374 | - |
| Stage 2 | - | - | - | 409 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 55.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 768 | - | - | - | 165 |
| HCM Lane V/C Ratio | 0.076 | - | - | - | 0.606 |
| HCM Control Delay (s) | 10.1 | 0 | - | - | 55.7 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 3.3 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 722 | 12 | 8 | 782 | 7 | 11 |
| Future Vol, veh/h | 722 | 12 | 8 | 782 | 7 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 87 | 87 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 776 | 13 | 9 | 899 | 14 | 22 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 789 | 0 | 1693 | 776 |
| Stage 1 | - | - | - | - | 776 | - |
| Stage 2 | - | - | - | - | 917 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 831 | - | 103 | 401 |
| Stage 1 | - | - | - | - | 457 | - |
| Stage 2 | - | - | - | - | 393 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 831 | - | 101 | 401 |
| Mov Cap-2 Maneuver | - | - | - | - | 101 | - |
| Stage 1 | - | - | - | - | 457 | - |
| Stage 2 | - | - | - | - | 384 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0.1 | 28.9 | | | |
| HCM LOS | D | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 186 | - | - | 831 | - | |
| HCM Lane V/C Ratio | 0.194 | - | - | 0.011 | - | |
| HCM Control Delay (s) | 28.9 | - | - | 9.4 | 0 | |
| HCM Lane LOS | D | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 7.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 50 | 680 | 730 | 38 | 37 | 55 |
| Future Vol, veh/h | 50 | 680 | 730 | 38 | 37 | 55 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 89 | 89 | 64 | 64 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 1 | 1 |
| Mvmt Flow | 56 | 764 | 820 | 43 | 58 | 86 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 863 | 0 | - | 0 | 1696 | 820 |
| Stage 1 | - | - | - | - | 820 | - |
| Stage 2 | - | - | - | - | 876 | - |
| Critical Hdwy | 4.11 | - | - | - | 6.41 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.41 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.41 | - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.509 | 3.309 |
| Pot Cap-1 Maneuver | 784 | - | - | - | 102 | 376 |
| Stage 1 | - | - | - | - | 435 | - |
| Stage 2 | - | - | - | - | 409 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 784 | - | - | - | 89 | 376 |
| Mov Cap-2 Maneuver | - | - | - | - | 89 | - |
| Stage 1 | - | - | - | - | 381 | - |
| Stage 2 | - | - | - | - | 409 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.7 | 0 | | 96.3 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 784 | - | - | - | 164 | |
| HCM Lane V/C Ratio | 0.072 | - | - | - | 0.877 | |
| HCM Control Delay (s) | 9.9 | 0 | - | - | 96.3 | |
| HCM Lane LOS | A | A | - | - | F | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 6.2 | |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 55 | 769 | 3 | 3 | 769 | 8 | 0 | 0 | 6 | 0 | 1 | 61 |
| Future Vol, veh/h | 55 | 769 | 3 | 3 | 769 | 8 | 0 | 0 | 6 | 0 | 1 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 96 | 96 | 96 | 42 | 42 | 42 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 59 | 827 | 3 | 3 | 801 | 8 | 0 | 0 | 14 | 0 | 1 | 69 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 809 | 0 | 0 | 830 | 0 | 0 | 1793 | 1762 | 829 | 1765 | 1759 | 805 |
| Stage 1 | - | - | - | - | - | - | 947 | 947 | - | 811 | 811 | - |
| Stage 2 | - | - | - | - | - | - | 846 | 815 | - | 954 | 948 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 821 | - | - | 802 | - | - | 63 | 85 | 374 | 66 | 86 | 386 |
| Stage 1 | - | - | - | - | - | - | 316 | 342 | - | 376 | 396 | - |
| Stage 2 | - | - | - | - | - | - | 360 | 394 | - | 313 | 342 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 821 | - | - | 802 | - | - | 46 | 73 | 374 | 57 | 74 | 386 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 46 | 73 | - | 57 | 74 | - |
| Stage 1 | - | - | - | - | - | - | 274 | 297 | - | 326 | 393 | - |
| Stage 2 | - | - | - | - | - | - | 292 | 391 | - | 261 | 297 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 15 | 17.4 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 374 | 821 | - | - | 802 | - | - | 361 |
| HCM Lane V/C Ratio | 0.038 | 0.072 | - | - | 0.004 | - | - | 0.195 |
| HCM Control Delay (s) | 15 | 9.7 | 0 | - | 9.5 | 0 | - | 17.4 |
| HCM Lane LOS | C | A | A | - | A | A | - | C |
| HCM 95th %tile Q(veh) | 0.1 | 0.2 | - | - | 0 | - | - | 0.7 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020

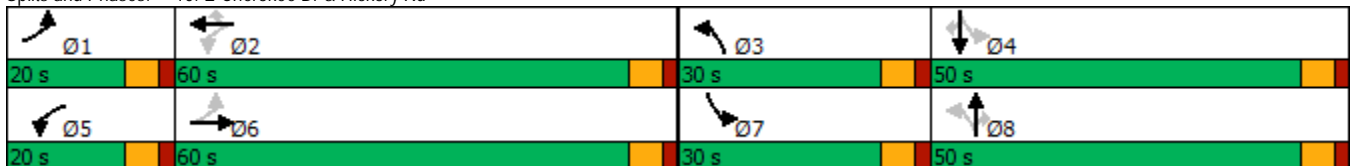


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 279 | 470 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Future Volume (vph) | 279 | 470 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 68.0 | 54.0 | 68.0 | 54.0 | 54.0 | 56.9 | 45.4 | 45.4 | 54.2 | 44.0 | 44.0 |
| Actuated g/C Ratio | 0.46 | 0.37 | 0.46 | 0.37 | 0.37 | 0.39 | 0.31 | 0.31 | 0.37 | 0.30 | 0.30 |
| v/c Ratio | 1.44 | 0.92 | 1.47 | 1.14 | 0.21 | 0.51 | 0.71 | 0.49 | 0.35 | 0.83 | 0.47 |
| Control Delay | 253.2 | 64.1 | 262.6 | 120.4 | 10.9 | 34.9 | 53.3 | 13.5 | 30.5 | 62.3 | 6.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 253.2 | 64.1 | 262.6 | 120.4 | 10.9 | 34.9 | 53.3 | 13.5 | 30.5 | 62.3 | 6.6 |
| LOS | F | E | F | F | B | C | D | B | C | E | A |
| Approach Delay | | 127.9 | | 146.9 | | | 35.6 | | | 38.1 | |
| Approach LOS | | F | | F | | | D | | | D | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 147.6 | |
| Natural Cycle: 170 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.47 | |
| Intersection Signal Delay: 93.8 | Intersection LOS: F |
| Intersection Capacity Utilization 101.4% | ICU Level of Service G |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 279 | 470 | 77 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Future Volume (veh/h) | 279 | 470 | 77 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 313 | 528 | 0 | 341 | 781 | 0 | 118 | 407 | 322 | 93 | 459 | 331 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Cap, veh/h | 222 | 698 | | 336 | 704 | | 211 | 593 | 502 | 229 | 569 | 482 |
| Arrive On Green | 0.10 | 0.37 | 0.00 | 0.10 | 0.37 | 0.00 | 0.06 | 0.31 | 0.31 | 0.05 | 0.30 | 0.30 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 313 | 528 | 0 | 341 | 781 | 0 | 118 | 407 | 322 | 93 | 459 | 331 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 14.0 | 35.6 | 0.0 | 14.0 | 54.0 | 0.0 | 6.5 | 27.3 | 25.0 | 5.1 | 32.7 | 26.6 |
| Cycle Q Clear(g_c), s | 14.0 | 35.6 | 0.0 | 14.0 | 54.0 | 0.0 | 6.5 | 27.3 | 25.0 | 5.1 | 32.7 | 26.6 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 222 | 698 | | 336 | 704 | | 211 | 593 | 502 | 229 | 569 | 482 |
| V/C Ratio(X) | 1.41 | 0.76 | | 1.02 | 1.11 | | 0.56 | 0.69 | 0.64 | 0.41 | 0.81 | 0.69 |
| Avail Cap(c_a), veh/h | 222 | 698 | | 336 | 704 | | 402 | 593 | 502 | 437 | 569 | 482 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.6 | 39.6 | 0.0 | 37.7 | 45.3 | 0.0 | 35.8 | 43.3 | 42.6 | 34.5 | 46.4 | 44.2 |
| Incr Delay (d2), s/veh | 208.5 | 7.5 | 0.0 | 53.4 | 68.1 | 0.0 | 2.3 | 4.3 | 3.8 | 1.2 | 11.6 | 7.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 17.4 | 17.5 | 0.0 | 10.4 | 37.8 | 0.0 | 3.0 | 13.4 | 10.4 | 2.3 | 17.0 | 11.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 255.1 | 47.0 | 0.0 | 91.0 | 113.4 | 0.0 | 38.1 | 47.6 | 46.4 | 35.7 | 58.0 | 52.0 |
| LnGrp LOS | F | D | | F | F | | D | D | D | D | E | D |
| Approach Vol, veh/h | | 841 | A | | 1122 | A | | 847 | | | 883 | |
| Approach Delay, s/veh | | 124.5 | | | 106.6 | | | 45.8 | | | 53.4 | |
| Approach LOS | | F | | | F | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 14.6 | 50.0 | 20.0 | 60.0 | 13.2 | 51.5 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.0 | 56.0 | 8.5 | 34.7 | 16.0 | 37.6 | 7.1 | 29.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.2 | 4.7 | 0.0 | 5.2 | 0.2 | 5.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 84.0 |
| HCM 6th LOS | F |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 5.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 106 | 65 | 73 | 471 | 443 | 116 |
| Future Vol, veh/h | 106 | 65 | 73 | 471 | 443 | 116 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 93 | 93 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 116 | 71 | 78 | 506 | 487 | 127 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1213 | 551 | 614 | 0 | 0 |
| Stage 1 | 551 | - | - | - | - |
| Stage 2 | 662 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 202 | 536 | 975 | - | - |
| Stage 1 | 579 | - | - | - | - |
| Stage 2 | 515 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 180 | 536 | 975 | - | - |
| Mov Cap-2 Maneuver | 180 | - | - | - | - |
| Stage 1 | 515 | - | - | - | - |
| Stage 2 | 515 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 37.7 | 1.2 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 975 | - | 290 | - | - |
| HCM Lane V/C Ratio | 0.081 | - | 0.648 | - | - |
| HCM Control Delay (s) | 9 | 0 | 37.7 | - | - |
| HCM Lane LOS | A | A | E | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 4.2 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 49 | 531 | 521 | 3 | 3 | 36 |
| Future Vol, veh/h | 49 | 531 | 521 | 3 | 3 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 52 | 565 | 560 | 3 | 4 | 43 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|------|-----|
| Conflicting Flow All | 563 | 0 | 0 | 1231 | 562 |
| Stage 1 | - | - | - | 562 | - |
| Stage 2 | - | - | - | 669 | - |
| Critical Hdwy | 4.1 | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1019 | - | - | 198 | 530 |
| Stage 1 | - | - | - | 575 | - |
| Stage 2 | - | - | - | 513 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1019 | - | - | 183 | 530 |
| Mov Cap-2 Maneuver | - | - | - | 183 | - |
| Stage 1 | - | - | - | 532 | - |
| Stage 2 | - | - | - | 513 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 13.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1019 | - | - | - | 463 |
| HCM Lane V/C Ratio | 0.051 | - | - | - | 0.101 |
| HCM Control Delay (s) | 8.7 | 0 | - | - | 13.7 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.3 |

HCM 6th TWSC
13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 42.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 159 | 6 | 3 | 4 | 5 | 10 | 1 | 538 | 3 | 4 | 517 | 248 |
| Future Vol, veh/h | 159 | 6 | 3 | 4 | 5 | 10 | 1 | 538 | 3 | 4 | 517 | 248 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 75 | 75 | 75 | 94 | 94 | 94 | 92 | 92 | 92 |
| Heavy Vehicles, % | 8 | 8 | 8 | 7 | 7 | 7 | 0 | 0 | 0 | 2 | 2 | 2 |
| Mvmt Flow | 189 | 7 | 4 | 5 | 7 | 13 | 1 | 572 | 3 | 4 | 562 | 270 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-------|-------|--------|---|---|--------|---|---|
| Conflicting Flow All | 1291 | 1282 | 697 | 1287 | 1416 | 574 | 832 | 0 | 0 | 575 | 0 | 0 |
| Stage 1 | 705 | 705 | - | 576 | 576 | - | - | - | - | - | - | - |
| Stage 2 | 586 | 577 | - | 711 | 840 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.18 | 6.58 | 6.28 | 7.17 | 6.57 | 6.27 | 4.1 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.572 | 4.072 | 3.372 | 3.563 | 4.063 | 3.363 | 2.2 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 136 | 161 | 431 | 138 | 134 | 509 | 809 | - | - | 998 | - | - |
| Stage 1 | 418 | 430 | - | 494 | 494 | - | - | - | - | - | - | - |
| Stage 2 | 486 | 492 | - | 416 | 374 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 126 | 159 | 431 | 131 | 133 | 509 | 809 | - | - | 998 | - | - |
| Mov Cap-2 Maneuver | ~ 126 | 159 | - | 131 | 133 | - | - | - | - | - | - | - |
| Stage 1 | 417 | 427 | - | 493 | 493 | - | - | - | - | - | - | - |
| Stage 2 | 466 | 491 | - | 402 | 371 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|----------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | \$ 343.3 | | | 23.9 | | | 0 | | | 0 | | |
| HCM LOS | F | | | C | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|----------|-------|-------|-----|-----|
| Capacity (veh/h) | 809 | - | - | 129 | 216 | 998 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 1.55 | 0.117 | 0.004 | - | - |
| HCM Control Delay (s) | 9.5 | 0 | - | \$ 343.3 | 23.9 | 8.6 | 0 | - |
| HCM Lane LOS | A | A | - | F | C | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 14.2 | 0.4 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020

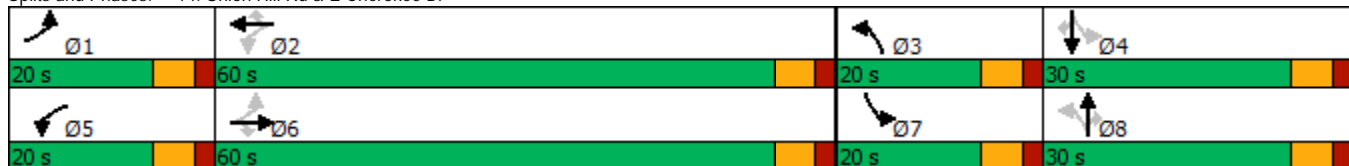


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Future Volume (vph) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 67.5 | 63.8 | 63.8 | 60.3 | 54.3 | 54.3 | 31.7 | 18.1 | 18.1 | 26.4 | 15.4 | 15.4 |
| Actuated g/C Ratio | 0.58 | 0.55 | 0.55 | 0.52 | 0.47 | 0.47 | 0.27 | 0.16 | 0.16 | 0.23 | 0.13 | 0.13 |
| v/c Ratio | 0.22 | 0.55 | 0.06 | 0.04 | 0.56 | 0.09 | 0.66 | 0.72 | 0.12 | 0.42 | 0.46 | 0.39 |
| Control Delay | 12.7 | 21.9 | 0.1 | 12.1 | 26.6 | 0.8 | 42.3 | 61.3 | 0.7 | 34.7 | 51.9 | 11.2 |
| 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 | 12.7 | 21.9 | 0.1 | 12.1 | 26.6 | 0.8 | 42.3 | 61.3 | 0.7 | 34.7 | 51.9 | 11.2 |
| LOS | B | C | A | B | C | A | D | E | A | C | D | B |
| Approach Delay | | 19.0 | | | 22.9 | | | 46.7 | | | 31.9 | |
| Approach LOS | | B | | | C | | | D | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 115.6 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.72 | |
| Intersection Signal Delay: 28.5 | Intersection LOS: C |
| Intersection Capacity Utilization 70.1% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Future Volume (veh/h) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 92 | 571 | 0 | 16 | 498 | 0 | 244 | 212 | 0 | 115 | 114 | 0 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.90 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cap, veh/h | 453 | 1021 | | 387 | 978 | | 338 | 264 | | 240 | 154 | |
| Arrive On Green | 0.04 | 0.54 | 0.00 | 0.01 | 0.51 | 0.00 | 0.13 | 0.14 | 0.00 | 0.08 | 0.08 | 0.00 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 92 | 571 | 0 | 16 | 498 | 0 | 244 | 212 | 0 | 115 | 114 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 2.5 | 20.9 | 0.0 | 0.4 | 18.1 | 0.0 | 12.6 | 11.4 | 0.0 | 6.1 | 6.2 | 0.0 |
| Cycle Q Clear(g_c), s | 2.5 | 20.9 | 0.0 | 0.4 | 18.1 | 0.0 | 12.6 | 11.4 | 0.0 | 6.1 | 6.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 453 | 1021 | | 387 | 978 | | 338 | 264 | | 240 | 154 | |
| V/C Ratio(X) | 0.20 | 0.56 | | 0.04 | 0.51 | | 0.72 | 0.80 | | 0.48 | 0.74 | |
| Avail Cap(c_a), veh/h | 619 | 1021 | | 603 | 978 | | 338 | 431 | | 345 | 431 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 12.6 | 15.8 | 0.0 | 13.3 | 16.7 | 0.0 | 36.0 | 43.7 | 0.0 | 40.0 | 47.1 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 2.2 | 0.0 | 0.0 | 1.9 | 0.0 | 7.4 | 5.6 | 0.0 | 1.5 | 6.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 8.6 | 0.0 | 0.2 | 7.7 | 0.0 | 6.0 | 5.5 | 0.0 | 2.7 | 3.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.9 | 18.0 | 0.0 | 13.4 | 18.6 | 0.0 | 43.4 | 49.3 | 0.0 | 41.5 | 53.8 | 0.0 |
| LnGrp LOS | B | B | | B | B | | D | D | | D | D | |
| Approach Vol, veh/h | | 663 | A | | 514 | A | | 456 | A | | 229 | A |
| Approach Delay, s/veh | | 17.3 | | | 18.5 | | | 46.1 | | | 47.6 | |
| Approach LOS | | B | | | B | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 60.0 | 20.0 | 14.6 | 7.5 | 62.8 | 13.9 | 20.7 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 20.1 | 14.6 | 8.2 | 2.4 | 22.9 | 8.1 | 13.4 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.0 | 0.0 | 0.4 | 0.0 | 3.6 | 0.1 | 0.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 28.4 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 13 | 15 | 584 | 466 | 5 |
| Future Vol, veh/h | 6 | 13 | 15 | 584 | 466 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 54 | 54 | 86 | 86 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 11 | 24 | 17 | 679 | 568 | 6 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1284 | 571 | 574 | 0 | 0 |
| Stage 1 | 571 | - | - | - | - |
| Stage 2 | 713 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 184 | 524 | 1009 | - | - |
| Stage 1 | 569 | - | - | - | - |
| Stage 2 | 489 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 179 | 524 | 1009 | - | - |
| Mov Cap-2 Maneuver | 179 | - | - | - | - |
| Stage 1 | 554 | - | - | - | - |
| Stage 2 | 489 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.4 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1009 | - | 326 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.108 | - | - |
| HCM Control Delay (s) | 8.6 | 0 | 17.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.4 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 40 | 12 | 15 | 547 | 467 | 31 |
| Future Vol, veh/h | 40 | 12 | 15 | 547 | 467 | 31 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 56 | 56 | 89 | 89 | 84 | 84 |
| Heavy Vehicles, % | 3 | 3 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 71 | 21 | 17 | 615 | 556 | 37 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1224 | 575 | 593 | 0 | 0 |
| Stage 1 | 575 | - | - | - | - |
| Stage 2 | 649 | - | - | - | - |
| Critical Hdwy | 6.43 | 6.23 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.43 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.43 | - | - | - | - |
| Follow-up Hdwy | 3.527 | 3.327 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 197 | 516 | 993 | - | - |
| Stage 1 | 561 | - | - | - | - |
| Stage 2 | 518 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 192 | 516 | 993 | - | - |
| Mov Cap-2 Maneuver | 192 | - | - | - | - |
| Stage 1 | 546 | - | - | - | - |
| Stage 2 | 518 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 31.8 | 0.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 993 | - | 225 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.413 | - | - |
| HCM Control Delay (s) | 8.7 | 0 | 31.8 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 1.9 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 543 | 41 | 5 | 470 | 37 | 8 |
| Future Vol, veh/h | 543 | 41 | 5 | 470 | 37 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 83 | 83 | 51 | 51 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 631 | 48 | 6 | 566 | 73 | 16 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 679 | 0 |
| Stage 1 | - | - | - | 655 |
| Stage 2 | - | - | - | 578 |
| Critical Hdwy | - | - | 4.1 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - |
| Pot Cap-1 Maneuver | - | - | 923 | - |
| Stage 1 | - | - | - | 521 |
| Stage 2 | - | - | - | 565 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 923 | - |
| Mov Cap-2 Maneuver | - | - | - | 195 |
| Stage 1 | - | - | - | 521 |
| Stage 2 | - | - | - | 560 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 32.3 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 218 | - | - | 923 | - |
| HCM Lane V/C Ratio | 0.405 | - | - | 0.007 | - |
| HCM Control Delay (s) | 32.3 | - | - | 8.9 | 0 |
| HCM Lane LOS | D | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.8 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 18 | 61 | 10 | 714 | 527 | 10 |
| Future Vol, veh/h | 18 | 61 | 10 | 714 | 527 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 84 | 84 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 20 | 67 | 12 | 850 | 573 | 11 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1453 | 579 | 584 | 0 | 0 |
| Stage 1 | 579 | - | - | - | - |
| Stage 2 | 874 | - | - | - | - |
| Critical Hdwy | 6.5 | 6.3 | 4.11 | - | - |
| Critical Hdwy Stg 1 | 5.5 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.5 | - | - | - | - |
| Follow-up Hdwy | 3.59 | 3.39 | 2.209 | - | - |
| Pot Cap-1 Maneuver | 138 | 500 | 996 | - | - |
| Stage 1 | 545 | - | - | - | - |
| Stage 2 | 395 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 135 | 500 | 996 | - | - |
| Mov Cap-2 Maneuver | 135 | - | - | - | - |
| Stage 1 | 532 | - | - | - | - |
| Stage 2 | 395 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 996 | - | 309 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.281 | - | - |
| HCM Control Delay (s) | 8.7 | 0 | 21.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.1 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 37 | 669 | 40 | 25 | 513 |
| Future Vol, veh/h | 17 | 37 | 669 | 40 | 25 | 513 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 71 | 71 | 88 | 88 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 6 | 6 | 6 | 6 |
| Mvmt Flow | 24 | 52 | 760 | 45 | 27 | 564 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1378 | 760 | 0 | 0 | 805 |
| Stage 1 | 760 | - | - | - | - |
| Stage 2 | 618 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.16 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.254 |
| Pot Cap-1 Maneuver | 161 | 409 | - | - | 802 |
| Stage 1 | 465 | - | - | - | - |
| Stage 2 | 542 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 153 | 409 | - | - | 802 |
| Mov Cap-2 Maneuver | 153 | - | - | - | - |
| Stage 1 | 465 | - | - | - | - |
| Stage 2 | 515 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 20.7 | 0 | 0.4 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 153 | 409 | 802 | - |
| HCM Lane V/C Ratio | - | - | 0.156 | 0.127 | 0.034 | - |
| HCM Control Delay (s) | - | - | 32.8 | 15.1 | 9.6 | 0 |
| HCM Lane LOS | - | - | D | C | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.4 | 0.1 | - |

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020

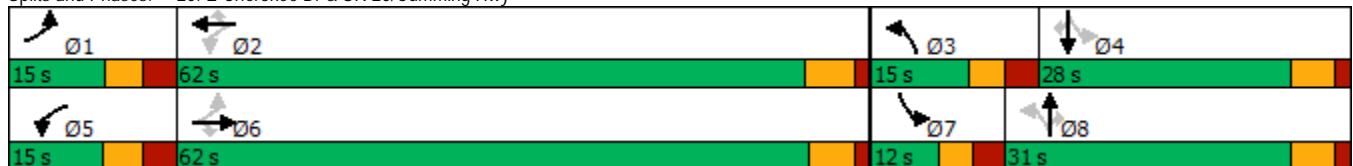


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Future Volume (vph) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 | 62.0 | 15.0 | 62.0 | 62.0 | 15.0 | 31.0 | 31.0 | 12.0 | 28.0 | 28.0 |
| Total Split (%) | 12.5% | 51.7% | 51.7% | 12.5% | 51.7% | 51.7% | 12.5% | 25.8% | 25.8% | 10.0% | 23.3% | 23.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 63.7 | 56.5 | 56.5 | 65.5 | 59.5 | 59.5 | 33.6 | 25.4 | 25.4 | 28.0 | 22.4 | 22.4 |
| Actuated g/C Ratio | 0.53 | 0.47 | 0.47 | 0.55 | 0.50 | 0.50 | 0.28 | 0.21 | 0.21 | 0.23 | 0.19 | 0.19 |
| v/c Ratio | 0.32 | 0.96 | 0.18 | 0.94 | 0.94 | 0.16 | 0.92 | 0.68 | 0.41 | 1.03 | 0.69 | 0.21 |
| Control Delay | 15.9 | 54.7 | 3.9 | 83.0 | 48.5 | 3.3 | 77.8 | 53.3 | 7.9 | 108.9 | 57.0 | 2.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.9 | 54.7 | 3.9 | 83.0 | 48.5 | 3.3 | 77.8 | 53.3 | 7.9 | 108.9 | 57.0 | 2.4 |
| LOS | B | D | A | F | D | A | E | D | A | F | E | A |
| Approach Delay | | 45.3 | | | 48.1 | | | 47.9 | | | 69.0 | |
| Approach LOS | | D | | | D | | | D | | | E | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.03 | |
| Intersection Signal Delay: 50.6 | Intersection LOS: D |
| Intersection Capacity Utilization 91.5% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Future Volume (veh/h) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1811 | 1811 | 1811 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 59 | 821 | 145 | 165 | 830 | 0 | 231 | 274 | 209 | 220 | 243 | 88 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.85 | 0.85 | 0.85 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 1 | 1 | 1 |
| Cap, veh/h | 188 | 860 | 729 | 196 | 872 | 0 | 263 | 402 | 341 | 222 | 352 | 298 |
| Arrive On Green | 0.06 | 0.47 | 0.47 | 0.07 | 0.48 | 0.00 | 0.07 | 0.21 | 0.21 | 0.05 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 59 | 821 | 145 | 165 | 830 | 0 | 231 | 274 | 209 | 220 | 243 | 88 |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 2.0 | 51.9 | 6.6 | 5.9 | 52.6 | 0.0 | 8.8 | 15.9 | 14.1 | 6.0 | 14.4 | 5.7 |
| Cycle Q Clear(g_c), s | 2.0 | 51.9 | 6.6 | 5.9 | 52.6 | 0.0 | 8.8 | 15.9 | 14.1 | 6.0 | 14.4 | 5.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 188 | 860 | 729 | 196 | 872 | 0 | 263 | 402 | 341 | 222 | 352 | 298 |
| V/C Ratio(X) | 0.31 | 0.95 | 0.20 | 0.84 | 0.95 | 0.00 | 0.88 | 0.68 | 0.61 | 0.99 | 0.69 | 0.30 |
| Avail Cap(c_a), veh/h | 213 | 860 | 729 | 203 | 872 | 0 | 263 | 402 | 341 | 222 | 352 | 298 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 25.9 | 30.5 | 18.5 | 27.2 | 29.7 | 0.0 | 43.4 | 43.6 | 42.8 | 48.1 | 45.5 | 42.0 |
| Incr Delay (d2), s/veh | 0.9 | 21.5 | 0.6 | 25.3 | 20.7 | 0.0 | 26.5 | 9.0 | 8.0 | 57.2 | 10.6 | 2.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.8 | 26.1 | 2.4 | 3.5 | 26.0 | 0.0 | 4.4 | 8.3 | 6.2 | 7.1 | 7.6 | 2.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 26.8 | 52.0 | 19.1 | 52.5 | 50.5 | 0.0 | 69.9 | 52.5 | 50.8 | 105.3 | 56.1 | 44.5 |
| LnGrp LOS | C | D | B | D | D | | E | D | D | F | E | D |
| Approach Vol, veh/h | | 1025 | | | 995 | A | | 714 | | | 551 | |
| Approach Delay, s/veh | | 45.9 | | | 50.8 | | | 57.7 | | | 73.9 | |
| Approach LOS | | D | | | D | | | E | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.3 | 63.7 | 15.0 | 28.0 | 14.6 | 62.4 | 12.0 | 31.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 8.6 | 56.1 | * 8.8 | * 22 | 8.4 | * 57 | 6.0 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.0 | 54.6 | 10.8 | 16.4 | 7.9 | 53.9 | 8.0 | 17.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.8 | 0.0 | 0.8 | 0.0 | 1.5 | 0.0 | 1.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 54.6 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 944 | 963 | 194 | 730 | 174 | 654 | 43 | 21 | 18 |
| Average Queue (ft) | 22 | 944 | 943 | 136 | 529 | 173 | 636 | 11 | 4 | 7 |
| 95th Queue (ft) | 133 | 944 | 950 | 217 | 831 | 177 | 644 | 34 | 17 | 20 |
| Link Distance (ft) | | 929 | 929 | | 719 | | 620 | | 144 | |
| Upstream Blk Time (%) | | 71 | 37 | | 2 | | 69 | | | |
| Queuing Penalty (veh) | | 0 | 0 | | 23 | | 0 | | | |
| Storage Bay Dist (ft) | 315 | | | 145 | | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 54 | | 13 | 31 | 70 | | | | |
| Queuing Penalty (veh) | | 11 | | 111 | 43 | 135 | | | | |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | WB | SB |
|-----------------------|-----|------|-----|
| Directions Served | LT | TR | LR |
| Maximum Queue (ft) | 632 | 393 | 50 |
| Average Queue (ft) | 177 | 40 | 15 |
| 95th Queue (ft) | 533 | 184 | 42 |
| Link Distance (ft) | 719 | 1487 | 352 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LT | LTR | LTR | LTR |
| Maximum Queue (ft) | 337 | 73 | 22 | 52 |
| Average Queue (ft) | 56 | 3 | 7 | 28 |
| 95th Queue (ft) | 193 | 25 | 23 | 51 |
| Link Distance (ft) | 1434 | 3846 | 517 | 824 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | 3 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 556 | 137 |
| Average Queue (ft) | 160 | 70 |
| 95th Queue (ft) | 361 | 123 |
| Link Distance (ft) | 3846 | 655 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 124 | 151 | 54 | 24 |
| Average Queue (ft) | 17 | 29 | 16 | 6 |
| 95th Queue (ft) | 75 | 112 | 39 | 23 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 176 | 84 |
| Average Queue (ft) | 48 | 32 |
| 95th Queue (ft) | 130 | 62 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 27 | 43 |
| Average Queue (ft) | 1 | 12 |
| 95th Queue (ft) | 9 | 33 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 329 | 140 |
| Average Queue (ft) | 41 | 51 |
| 95th Queue (ft) | 157 | 97 |
| Link Distance (ft) | 2510 | 472 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 205 | 49 | 22 | 51 |
| Average Queue (ft) | 47 | 4 | 3 | 25 |
| 95th Queue (ft) | 139 | 22 | 15 | 41 |
| Link Distance (ft) | 4030 | 2936 | 637 | 210 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 956 | 350 | 726 | 400 | 225 | 504 | 419 | 170 | 496 | 223 |
| Average Queue (ft) | 369 | 861 | 303 | 694 | 185 | 96 | 232 | 110 | 97 | 309 | 124 |
| 95th Queue (ft) | 444 | 1104 | 429 | 706 | 512 | 202 | 389 | 272 | 197 | 454 | 202 |
| Link Distance (ft) | | 904 | | 677 | | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | 63 | | 52 | | | | | | | |
| Queuing Penalty (veh) | | 0 | | 0 | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 350 | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 46 | 35 | 16 | 47 | | 0 | 19 | 2 | 0 | 48 | |
| Queuing Penalty (veh) | 252 | 98 | 138 | 208 | | 0 | 78 | 10 | 0 | 183 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 128 | 174 | 22 |
| Average Queue (ft) | 52 | 47 | 1 |
| 95th Queue (ft) | 108 | 114 | 8 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 94 | 46 |
| Average Queue (ft) | 26 | 18 |
| 95th Queue (ft) | 75 | 35 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB | SB |
|-----------------------|-----|-----|------|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 238 | 50 | 54 |
| Average Queue (ft) | 98 | 15 | 3 |
| 95th Queue (ft) | 180 | 41 | 20 |
| Link Distance (ft) | 614 | 581 | 3762 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | L | T |
| Maximum Queue (ft) | 224 | 441 | 225 | 53 | 346 | 244 | 234 | 237 | 118 | 138 |
| Average Queue (ft) | 44 | 174 | 32 | 10 | 152 | 17 | 114 | 106 | 54 | 72 |
| 95th Queue (ft) | 108 | 328 | 162 | 33 | 257 | 121 | 177 | 200 | 106 | 127 |
| Link Distance (ft) | | 3762 | | | 1100 | | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 195 | 185 | | 190 | |
| Storage Blk Time (%) | | 7 | | | 3 | | | 3 | | |
| Queuing Penalty (veh) | | 10 | | | 2 | | | 9 | | |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 50 | 96 |
| Average Queue (ft) | 14 | 12 |
| 95th Queue (ft) | 41 | 49 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 51 | 153 |
| Average Queue (ft) | 26 | 16 |
| 95th Queue (ft) | 48 | 66 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 67 |
| Average Queue (ft) | 2 | 22 |
| 95th Queue (ft) | 18 | 45 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 111 | 175 |
| Average Queue (ft) | 48 | 12 |
| 95th Queue (ft) | 92 | 69 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | SB |
|-----------------------|-----|------|
| Directions Served | L | LT |
| Maximum Queue (ft) | 42 | 77 |
| Average Queue (ft) | 13 | 18 |
| 95th Queue (ft) | 33 | 58 |
| Link Distance (ft) | 484 | 1053 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 230 | 765 | 310 | 260 | 1078 | 220 | 279 | 325 | 193 | 270 | 804 | 100 |
| Average Queue (ft) | 85 | 709 | 202 | 163 | 539 | 94 | 163 | 137 | 89 | 250 | 436 | 57 |
| 95th Queue (ft) | 217 | 867 | 425 | 294 | 935 | 273 | 263 | 236 | 168 | 319 | 754 | 116 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | 788 | |
| Upstream Blk Time (%) | | 47 | | | | | | | | | | 2 |
| Queuing Penalty (veh) | | 0 | | | | | | | | | | 0 |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 48 | | | 33 | | 5 | 0 | | 59 | 64 | 17 |
| Queuing Penalty (veh) | | 93 | | | 91 | | 21 | 0 | | 162 | 164 | 66 |

Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 1910 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 35.0 | 58.0 | 58.0 | 30.0 | 53.0 | 53.0 | 25.0 | 37.0 | 25.0 | 37.0 | 37.0 |
| Total Split (%) | 23.3% | 38.7% | 38.7% | 20.0% | 35.3% | 35.3% | 16.7% | 24.7% | 16.7% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 59.1 | 46.8 | 46.8 | 77.1 | 58.6 | 58.6 | 50.2 | 30.9 | 50.6 | 31.7 | 31.7 |
| Actuated g/C Ratio | 0.41 | 0.32 | 0.32 | 0.53 | 0.40 | 0.40 | 0.35 | 0.21 | 0.35 | 0.22 | 0.22 |
| v/c Ratio | 0.62 | 0.88 | 0.82 | 0.98 | 1.50 | 0.14 | 0.69 | 0.43 | 0.26 | 0.38 | 0.38 |
| Control Delay | 41.8 | 64.2 | 21.0 | 79.7 | 263.3 | 4.2 | 44.4 | 45.7 | 32.6 | 53.4 | 8.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.8 | 64.2 | 21.0 | 79.7 | 263.3 | 4.2 | 44.4 | 45.7 | 32.6 | 53.4 | 8.9 |
| LOS | D | E | C | E | F | A | D | D | C | D | A |
| Approach Delay | | 39.9 | | | 205.0 | | | 44.8 | | 29.8 | |
| Approach LOS | | D | | | F | | | D | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 145.4

Natural Cycle: 160

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.50

Intersection Signal Delay: 107.6

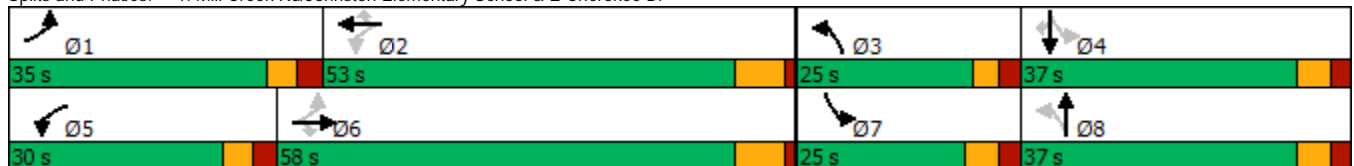
Intersection LOS: F

Intersection Capacity Utilization 97.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|-------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 71 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 71 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 525 | 686 | 358 | 1123 | 102 | 316 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 150 | 632 | 536 | 368 | 826 | 700 | 416 | 378 | | 481 | 375 | 318 |
| Arrive On Green | 0.06 | 0.34 | 0.34 | 0.16 | 0.44 | 0.44 | 0.13 | 0.21 | 0.00 | 0.13 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 525 | 686 | 358 | 1123 | 102 | 316 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 6.5 | 39.0 | 51.1 | 22.8 | 66.2 | 5.8 | 19.5 | 5.7 | 0.0 | 6.8 | 10.5 | 15.9 |
| Cycle Q Clear(g_c), s | 6.5 | 39.0 | 51.1 | 22.8 | 66.2 | 5.8 | 19.5 | 5.7 | 0.0 | 6.8 | 10.5 | 15.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 150 | 632 | 536 | 368 | 826 | 700 | 416 | 378 | | 481 | 375 | 318 |
| V/C Ratio(X) | 0.79 | 0.83 | 1.28 | 0.97 | 1.36 | 0.15 | 0.76 | 0.22 | | 0.23 | 0.39 | 0.57 |
| Avail Cap(c_a), veh/h | 387 | 632 | 536 | 368 | 826 | 700 | 416 | 378 | | 481 | 375 | 318 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.8 | 45.5 | 49.5 | 41.9 | 41.9 | 25.0 | 42.2 | 49.6 | 0.0 | 36.0 | 51.5 | 53.7 |
| Incr Delay (d2), s/veh | 8.7 | 9.1 | 140.1 | 39.7 | 169.8 | 0.1 | 8.0 | 1.4 | 0.0 | 1.1 | 3.1 | 7.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.2 | 19.6 | 40.6 | 17.6 | 69.1 | 2.2 | 10.4 | 2.8 | 0.0 | 3.1 | 5.2 | 6.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 46.5 | 54.6 | 189.5 | 81.7 | 211.6 | 25.1 | 50.1 | 51.0 | 0.0 | 37.1 | 54.6 | 61.0 |
| LnGrp LOS | D | D | F | F | F | C | D | D | | D | D | E |
| Approach Vol, veh/h | | 1329 | | | 1583 | | | 400 | A | | 440 | |
| Approach Delay, s/veh | | 123.5 | | | 170.2 | | | 50.3 | | | 52.9 | |
| Approach LOS | | F | | | F | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.9 | 73.1 | 25.0 | 37.0 | 30.0 | 58.0 | 25.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 29 | 46.1 | 19.5 | * 31 | * 24 | 51.1 | * 19 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.5 | 68.2 | 21.5 | 17.9 | 24.8 | 53.1 | 8.8 | 7.7 | | | | |
| Green Ext Time (p_c), s | 0.3 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.2 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 127.1 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 699 | 1294 | 4 | 6 | 37 |
| Future Vol, veh/h | 11 | 699 | 1294 | 4 | 6 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 82 | 82 | 83 | 83 |
| Heavy Vehicles, % | 5 | 5 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 12 | 752 | 1578 | 5 | 7 | 45 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1583 | 0 | - | 0 | 2357 | 1581 |
| Stage 1 | - | - | - | - | 1581 | - |
| Stage 2 | - | - | - | - | 776 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | 407 | - | - | - | 38 | 131 |
| Stage 1 | - | - | - | - | 181 | - |
| Stage 2 | - | - | - | - | 445 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 407 | - | - | - | 36 | 131 |
| Mov Cap-2 Maneuver | - | - | - | - | 36 | - |
| Stage 1 | - | - | - | - | 172 | - |
| Stage 2 | - | - | - | - | 445 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 79.8 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 407 | - | - | - | 96 | |
| HCM Lane V/C Ratio | 0.029 | - | - | - | 0.54 | |
| HCM Control Delay (s) | 14.1 | 0 | - | - | 79.8 | |
| HCM Lane LOS | B | A | - | - | F | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 2.4 | |

HCM 6th TWSC
 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 19.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 22 | 641 | 6 | 1 | 865 | 16 | 13 | 0 | 11 | 44 | 1 | 78 |
| Future Vol, veh/h | 22 | 641 | 6 | 1 | 865 | 16 | 13 | 0 | 11 | 44 | 1 | 78 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 91 | 91 | 91 | 75 | 75 | 75 | 74 | 74 | 74 |
| Heavy Vehicles, % | 6 | 6 | 6 | 2 | 2 | 2 | 8 | 8 | 8 | 1 | 1 | 1 |
| Mvmt Flow | 23 | 668 | 6 | 1 | 951 | 18 | 17 | 0 | 15 | 59 | 1 | 105 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 969 | 0 | 0 | 674 | 0 | 0 | 1729 | 1685 | 668 | 1687 | 1682 | 960 |
| Stage 1 | - | - | - | - | - | - | 714 | 714 | - | 962 | 962 | - |
| Stage 2 | - | - | - | - | - | - | 1015 | 971 | - | 725 | 720 | - |
| Critical Hdwy | 4.16 | - | - | 4.12 | - | - | 7.18 | 6.58 | 6.28 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.254 | - | - | 2.218 | - | - | 3.572 | 4.072 | 3.372 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 695 | - | - | 917 | - | - | 67 | 91 | 448 | 75 | 95 | 313 |
| Stage 1 | - | - | - | - | - | - | 413 | 426 | - | 309 | 336 | - |
| Stage 2 | - | - | - | - | - | - | 280 | 323 | - | 418 | 434 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 695 | - | - | 917 | - | - | 42 | 86 | 448 | 70 | 90 | 313 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 42 | 86 | - | 70 | 90 | - |
| Stage 1 | - | - | - | - | - | - | 391 | 403 | - | 293 | 335 | - |
| Stage 2 | - | - | - | - | - | - | 185 | 322 | - | 383 | 411 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|-------|
| HCM Control Delay, s | 0.3 | 0 | 90.1 | 204.6 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 72 | 695 | - | - | 917 | - | - | 138 |
| HCM Lane V/C Ratio | 0.444 | 0.033 | - | - | 0.001 | - | - | 1.204 |
| HCM Control Delay (s) | 90.1 | 10.4 | 0 | - | 8.9 | 0 | - | 204.6 |
| HCM Lane LOS | F | B | A | - | A | A | - | F |
| HCM 95th %tile Q(veh) | 1.8 | 0.1 | - | - | 0 | - | - | 9.9 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 145.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 26 | 665 | 795 | 52 | 218 | 65 |
| Future Vol, veh/h | 26 | 665 | 795 | 52 | 218 | 65 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 90 | 90 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 28 | 707 | 883 | 58 | 251 | 75 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 941 | 0 | 0 | 1675 | 912 |
| Stage 1 | - | - | - | 912 | - |
| Stage 2 | - | - | - | 763 | - |
| Critical Hdwy | 4.15 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 716 | - | - | ~ 104 | 330 |
| Stage 1 | - | - | - | 390 | - |
| Stage 2 | - | - | - | 459 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 716 | - | - | ~ 97 | 330 |
| Mov Cap-2 Maneuver | - | - | - | ~ 97 | - |
| Stage 1 | - | - | - | 365 | - |
| Stage 2 | - | - | - | 459 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 0.4 | 0 | \$ 893.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 716 | - | - | - | 116 |
| HCM Lane V/C Ratio | 0.039 | - | - | - | 2.804 |
| HCM Control Delay (s) | 10.2 | 0 | - | - | \$ 893.6 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 30.2 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 869 | 10 | 6 | 802 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Future Vol, veh/h | 2 | 869 | 10 | 6 | 802 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 89 | 89 | 89 | 73 | 73 | 73 | 58 | 58 | 58 |
| Heavy Vehicles, % | 4 | 4 | 4 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 2 | 924 | 11 | 7 | 901 | 6 | 25 | 0 | 32 | 9 | 0 | 28 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 907 | 0 | 0 | 935 | 0 | 0 | 1866 | 1855 | 930 | 1868 | 1857 | 904 |
| Stage 1 | - | - | - | - | - | - | 934 | 934 | - | 918 | 918 | - |
| Stage 2 | - | - | - | - | - | - | 932 | 921 | - | 950 | 939 | - |
| Critical Hdwy | 4.14 | - | - | 4.11 | - | - | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.209 | - | - | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 |
| Pot Cap-1 Maneuver | 742 | - | - | 736 | - | - | 55 | 72 | 320 | 54 | 72 | 331 |
| Stage 1 | - | - | - | - | - | - | 315 | 341 | - | 322 | 346 | - |
| Stage 2 | - | - | - | - | - | - | 316 | 345 | - | 309 | 339 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 742 | - | - | 736 | - | - | 49 | 70 | 320 | 48 | 70 | 331 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 49 | 70 | - | 48 | 70 | - |
| Stage 1 | - | - | - | - | - | - | 313 | 339 | - | 320 | 339 | - |
| Stage 2 | - | - | - | - | - | - | 284 | 338 | - | 277 | 337 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 0.1 | 90.5 | 40.1 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 93 | 742 | - | - | 736 | - | - | 138 |
| HCM Lane V/C Ratio | 0.604 | 0.003 | - | - | 0.009 | - | - | 0.262 |
| HCM Control Delay (s) | 90.5 | 9.9 | 0 | - | 9.9 | 0 | - | 40.1 |
| HCM Lane LOS | F | A | A | - | A | A | - | E |
| HCM 95th %tile Q(veh) | 2.8 | 0 | - | - | 0 | - | - | 1 |

HCM 6th TWSC
6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 14.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | ↕ | ↕ | |
| Traffic Vol, veh/h | 13 | 744 | 845 | 16 | 56 | 44 |
| Future Vol, veh/h | 13 | 744 | 845 | 16 | 56 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 89 | 87 | 68 | 68 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 809 | 949 | 18 | 82 | 65 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 967 | 0 | 0 | 1786 | 949 |
| Stage 1 | - | - | - | 949 | - |
| Stage 2 | - | - | - | 837 | - |
| Critical Hdwy | 4.14 | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.236 | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 704 | - | - | 90 | 316 |
| Stage 1 | - | - | - | 376 | - |
| Stage 2 | - | - | - | 425 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 704 | - | - | 87 | 316 |
| Mov Cap-2 Maneuver | - | - | - | 87 | - |
| Stage 1 | - | - | - | 362 | - |
| Stage 2 | - | - | - | 425 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 0.2 | 0 | 191.8 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 704 | - | - | - | 128 |
| HCM Lane V/C Ratio | 0.02 | - | - | - | 1.149 |
| HCM Control Delay (s) | 10.2 | 0 | - | - | 191.8 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 8.7 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 810 | 9 | 2 | 838 | 19 | 9 |
| Future Vol, veh/h | 810 | 9 | 2 | 838 | 19 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 83 | 83 | 64 | 64 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 890 | 10 | 2 | 1010 | 30 | 14 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 900 | 0 | 1904 | 890 |
| Stage 1 | - | - | - | - | 890 | - |
| Stage 2 | - | - | - | - | 1014 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | - | - | 755 | - | 73 | 335 |
| Stage 1 | - | - | - | - | 393 | - |
| Stage 2 | - | - | - | - | 343 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 755 | - | 73 | 335 |
| Mov Cap-2 Maneuver | - | - | - | - | 73 | - |
| Stage 1 | - | - | - | - | 393 | - |
| Stage 2 | - | - | - | - | 341 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0 | 68.5 | | | |
| HCM LOS | F | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 98 | - | - | 755 | - | |
| HCM Lane V/C Ratio | 0.446 | - | - | 0.003 | - | |
| HCM Control Delay (s) | 68.5 | - | - | 9.8 | 0 | |
| HCM Lane LOS | F | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1.9 | - | - | 0 | - | |

HCM 6th TWSC
8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 797 | 767 | 10 | 52 | 63 |
| Future Vol, veh/h | 16 | 797 | 767 | 10 | 52 | 63 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 91 | 91 | 81 | 81 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 17 | 866 | 843 | 11 | 64 | 78 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 854 | 0 | - | 0 | 1743 843 |
| Stage 1 | - | - | - | - | 843 - |
| Stage 2 | - | - | - | - | 900 - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 773 | - | - | - | 95 362 |
| Stage 1 | - | - | - | - | 420 - |
| Stage 2 | - | - | - | - | 395 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 773 | - | - | - | 91 362 |
| Mov Cap-2 Maneuver | - | - | - | - | 91 - |
| Stage 1 | - | - | - | - | 402 - |
| Stage 2 | - | - | - | - | 395 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 0.2 | 0 | 110.8 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 773 | - | - | - | 154 |
| HCM Lane V/C Ratio | 0.022 | - | - | - | 0.922 |
| HCM Control Delay (s) | 9.8 | 0 | - | - | 110.8 |
| HCM Lane LOS | A | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 6.6 |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 42 | 906 | 5 | 6 | 752 | 10 | 3 | 0 | 7 | 6 | 0 | 125 |
| Future Vol, veh/h | 42 | 906 | 5 | 6 | 752 | 10 | 3 | 0 | 7 | 6 | 0 | 125 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 95 | 95 | 95 | 44 | 44 | 44 | 73 | 73 | 73 |
| Heavy Vehicles, % | 4 | 4 | 4 | 2 | 2 | 2 | 14 | 14 | 14 | 1 | 1 | 1 |
| Mvmt Flow | 49 | 1053 | 6 | 6 | 792 | 11 | 7 | 0 | 16 | 8 | 0 | 171 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 803 | 0 | 0 | 1059 | 0 | 0 | 2049 | 1969 | 1056 | 1972 | 1967 | 798 |
| Stage 1 | - | - | - | - | - | - | 1154 | 1154 | - | 810 | 810 | - |
| Stage 2 | - | - | - | - | - | - | 895 | 815 | - | 1162 | 1157 | - |
| Critical Hdwy | 4.14 | - | - | 4.12 | - | - | 7.24 | 6.64 | 6.34 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.218 | - | - | 3.626 | 4.126 | 3.426 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 812 | - | - | 658 | - | - | 38 | 58 | 259 | 47 | 63 | 388 |
| Stage 1 | - | - | - | - | - | - | 227 | 258 | - | 375 | 395 | - |
| Stage 2 | - | - | - | - | - | - | 319 | 374 | - | 239 | 272 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 812 | - | - | 658 | - | - | 19 | 49 | 259 | 39 | 53 | 388 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 19 | 49 | - | 39 | 53 | - |
| Stage 1 | - | - | - | - | - | - | 194 | 220 | - | 320 | 389 | - |
| Stage 2 | - | - | - | - | - | - | 175 | 368 | - | 191 | 232 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-------|------|
| HCM Control Delay, s | 0.4 | 0.1 | 113.4 | 39.7 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 54 | 812 | - | - | 658 | - | - | 275 |
| HCM Lane V/C Ratio | 0.421 | 0.06 | - | - | 0.01 | - | - | 0.653 |
| HCM Control Delay (s) | 113.4 | 9.7 | 0 | - | 10.5 | 0 | - | 39.7 |
| HCM Lane LOS | F | A | A | - | B | A | - | E |
| HCM 95th %tile Q(veh) | 1.6 | 0.2 | - | - | 0 | - | - | 4.2 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 382 | 742 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Future Volume (vph) | 382 | 742 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 68.1 | 54.0 | 68.1 | 54.0 | 54.0 | 59.5 | 43.8 | 43.8 | 60.9 | 44.5 | 44.5 |
| Actuated g/C Ratio | 0.45 | 0.35 | 0.45 | 0.35 | 0.35 | 0.39 | 0.29 | 0.29 | 0.40 | 0.29 | 0.29 |
| v/c Ratio | 1.28 | 1.36 | 1.12 | 0.69 | 0.25 | 0.82 | 0.76 | 0.51 | 0.64 | 1.05 | 0.65 |
| Control Delay | 176.3 | 208.8 | 136.4 | 49.4 | 5.7 | 65.2 | 60.6 | 14.8 | 37.4 | 101.9 | 15.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 176.3 | 208.8 | 136.4 | 49.4 | 5.7 | 65.2 | 60.6 | 14.8 | 37.4 | 101.9 | 15.9 |
| LOS | F | F | F | D | A | E | E | B | D | F | B |
| Approach Delay | | 198.2 | | 64.6 | | | 45.7 | | | 59.3 | |
| Approach LOS | | F | | E | | | D | | | E | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 152.3 | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.36 | |
| Intersection Signal Delay: 100.4 | Intersection LOS: F |
| Intersection Capacity Utilization 108.2% | ICU Level of Service G |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd

| | | | |
|------------|------------|------------|------------|
| Ø1 20 s | Ø2 60 s | Ø3 30 s | Ø4 50 s |
| Ø5 20 s | Ø6 60 s | Ø7 30 s | Ø8 50 s |

HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|------|------|------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Future Volume (veh/h) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 434 | 843 | 0 | 229 | 444 | 0 | 186 | 404 | 313 | 200 | 574 | 463 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.91 | 0.91 | 0.91 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 3 | 1 | 1 | 1 |
| Cap, veh/h | 364 | 680 | | 211 | 658 | | 211 | 543 | 461 | 286 | 554 | 469 |
| Arrive On Green | 0.09 | 0.36 | 0.00 | 0.09 | 0.36 | 0.00 | 0.09 | 0.29 | 0.29 | 0.09 | 0.29 | 0.29 |
| Sat Flow, veh/h | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 434 | 843 | 0 | 229 | 444 | 0 | 186 | 404 | 313 | 200 | 574 | 463 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 14.0 | 54.0 | 0.0 | 14.0 | 30.8 | 0.0 | 11.4 | 29.5 | 26.3 | 11.5 | 44.0 | 43.2 |
| Cycle Q Clear(g_c), s | 14.0 | 54.0 | 0.0 | 14.0 | 30.8 | 0.0 | 11.4 | 29.5 | 26.3 | 11.5 | 44.0 | 43.2 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 364 | 680 | | 211 | 658 | | 211 | 543 | 461 | 286 | 554 | 469 |
| V/C Ratio(X) | 1.19 | 1.24 | | 1.09 | 0.67 | | 0.88 | 0.74 | 0.68 | 0.70 | 1.04 | 0.99 |
| Avail Cap(c_a), veh/h | 364 | 680 | | 211 | 658 | | 331 | 545 | 462 | 407 | 554 | 469 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 42.0 | 47.9 | 0.0 | 47.6 | 40.5 | 0.0 | 41.6 | 47.9 | 46.8 | 35.8 | 52.9 | 52.6 |
| Incr Delay (d2), s/veh | 111.0 | 120.5 | 0.0 | 87.3 | 5.5 | 0.0 | 15.5 | 6.6 | 5.2 | 3.1 | 48.0 | 38.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 18.3 | 47.9 | 0.0 | 9.8 | 14.9 | 0.0 | 5.9 | 14.7 | 11.0 | 5.3 | 28.2 | 22.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 153.1 | 168.4 | 0.0 | 134.9 | 45.9 | 0.0 | 57.1 | 54.4 | 52.0 | 38.9 | 100.9 | 91.0 |
| LnGrp LOS | F | F | | F | D | | E | D | D | D | F | F |
| Approach Vol, veh/h | | 1277 | A | | 673 | A | | 903 | | | 1237 | |
| Approach Delay, s/veh | | 163.2 | | | 76.2 | | | 54.1 | | | 87.2 | |
| Approach LOS | | F | | | E | | | D | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 19.8 | 50.0 | 20.0 | 60.0 | 19.9 | 49.9 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.0 | 32.8 | 13.4 | 46.0 | 16.0 | 56.0 | 13.5 | 31.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 5.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 | 5.4 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 101.8 |
| HCM 6th LOS | F |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
 11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 8.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 152 | 129 | 34 | 237 | 552 | 94 |
| Future Vol, veh/h | 152 | 129 | 34 | 237 | 552 | 94 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 71 | 71 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 8 | 8 |
| Mvmt Flow | 167 | 142 | 48 | 334 | 607 | 103 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1089 | 659 | 710 | 0 | 0 |
| Stage 1 | 659 | - | - | - | - |
| Stage 2 | 430 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.19 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.281 | - | - |
| Pot Cap-1 Maneuver | 240 | 465 | 858 | - | - |
| Stage 1 | 516 | - | - | - | - |
| Stage 2 | 658 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 223 | 465 | 858 | - | - |
| Mov Cap-2 Maneuver | 223 | - | - | - | - |
| Stage 1 | 480 | - | - | - | - |
| Stage 2 | 658 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 35.6 | 1.2 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 858 | - | 412 | - | - |
| HCM Lane V/C Ratio | 0.056 | - | 0.749 | - | - |
| HCM Control Delay (s) | 9.4 | 0 | 35.6 | - | - |
| HCM Lane LOS | A | A | E | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 6.1 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 15 | 362 | 612 | 0 | 1 | 57 |
| Future Vol, veh/h | 15 | 362 | 612 | 0 | 1 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 94 | 94 | 75 | 75 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 18 | 431 | 651 | 0 | 1 | 76 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 651 | 0 | 0 | 1118 | 651 |
| Stage 1 | - | - | - | 651 | - |
| Stage 2 | - | - | - | 467 | - |
| Critical Hdwy | 4.12 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.218 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 935 | - | - | 228 | 467 |
| Stage 1 | - | - | - | 517 | - |
| Stage 2 | - | - | - | 629 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 935 | - | - | 222 | 467 |
| Mov Cap-2 Maneuver | - | - | - | 222 | - |
| Stage 1 | - | - | - | 504 | - |
| Stage 2 | - | - | - | 629 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0 | 14.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 935 | - | - | - | 458 |
| HCM Lane V/C Ratio | 0.019 | - | - | - | 0.169 |
| HCM Control Delay (s) | 8.9 | 0 | - | - | 14.5 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.6 |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 56.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 227 | 0 | 0 | 0 | 0 | 5 | 0 | 371 | 6 | 1 | 599 | 162 |
| Future Vol, veh/h | 227 | 0 | 0 | 0 | 0 | 5 | 0 | 371 | 6 | 1 | 599 | 162 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 75 | 75 | 75 | 77 | 77 | 77 | 95 | 95 | 95 |
| Heavy Vehicles, % | 4 | 4 | 4 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 |
| Mvmt Flow | 249 | 0 | 0 | 0 | 0 | 7 | 0 | 482 | 8 | 1 | 631 | 171 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1209 | 1209 | 717 | 1205 | 1290 | 486 | 802 | 0 | 0 | 490 | 0 | 0 |
| Stage 1 | 719 | 719 | - | 486 | 486 | - | - | - | - | - | - | - |
| Stage 2 | 490 | 490 | - | 719 | 804 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.14 | 6.54 | 6.24 | 7.1 | 6.5 | 6.2 | 4.13 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.036 | 3.336 | 3.5 | 4 | 3.3 | 2.227 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 158 | 181 | 426 | 162 | 165 | 585 | 817 | - | - | 1073 | - | - |
| Stage 1 | 416 | 430 | - | 566 | 554 | - | - | - | - | - | - | - |
| Stage 2 | 556 | 545 | - | 423 | 398 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 156 | 181 | 426 | 162 | 165 | 585 | 817 | - | - | 1073 | - | - |
| Mov Cap-2 Maneuver | ~ 156 | 181 | - | 162 | 165 | - | - | - | - | - | - | - |
| Stage 1 | 416 | 429 | - | 566 | 554 | - | - | - | - | - | - | - |
| Stage 2 | 550 | 545 | - | 422 | 397 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|----------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | \$ 349.3 | | | 11.2 | | | 0 | | | 0 | | |
| HCM LOS | F | | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|----------|-------|-------|-----|-----|
| Capacity (veh/h) | 817 | - | - | 156 | 585 | 1073 | - | - |
| HCM Lane V/C Ratio | - | - | - | 1.599 | 0.011 | 0.001 | - | - |
| HCM Control Delay (s) | 0 | - | - | \$ 349.3 | 11.2 | 8.4 | 0 | - |
| HCM Lane LOS | A | - | - | F | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 17.1 | 0 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020

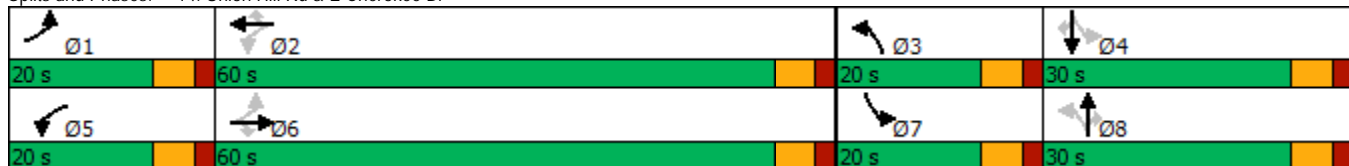


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Future Volume (vph) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 62.1 | 54.2 | 54.2 | 69.5 | 60.1 | 60.1 | 27.2 | 17.7 | 17.7 | 35.9 | 24.9 | 24.9 |
| Actuated g/C Ratio | 0.51 | 0.45 | 0.45 | 0.57 | 0.50 | 0.50 | 0.22 | 0.15 | 0.15 | 0.30 | 0.21 | 0.21 |
| v/c Ratio | 0.29 | 0.63 | 0.18 | 0.43 | 0.76 | 0.30 | 0.33 | 0.59 | 0.49 | 1.03 | 0.76 | 0.31 |
| Control Delay | 14.9 | 31.2 | 5.5 | 15.5 | 34.0 | 9.3 | 34.3 | 57.5 | 10.6 | 98.1 | 61.9 | 9.6 |
| 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 | 14.9 | 31.2 | 5.5 | 15.5 | 34.0 | 9.3 | 34.3 | 57.5 | 10.6 | 98.1 | 61.9 | 9.6 |
| LOS | B | C | A | B | C | A | C | E | B | F | E | A |
| Approach Delay | | 24.5 | | | 25.6 | | | 32.3 | | | 69.0 | |
| Approach LOS | | C | | | C | | | C | | | E | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 121.2 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.03 | |
| Intersection Signal Delay: 36.9 | Intersection LOS: D |
| Intersection Capacity Utilization 73.7% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Future Volume (veh/h) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 | 1885 | 1885 | 1885 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h | 80 | 512 | 0 | 168 | 685 | 0 | 83 | 161 | 0 | 327 | 276 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.82 | 0.82 | 0.82 | 0.66 | 0.66 | 0.66 | 0.75 | 0.75 | 0.75 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 1 | 8 | 8 | 8 |
| Cap, veh/h | 297 | 893 | | 430 | 939 | | 192 | 200 | | 305 | 316 | |
| Arrive On Green | 0.04 | 0.49 | 0.00 | 0.07 | 0.51 | 0.00 | 0.05 | 0.11 | 0.00 | 0.13 | 0.18 | 0.00 |
| Sat Flow, veh/h | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Grp Volume(v), veh/h | 80 | 512 | 0 | 168 | 685 | 0 | 83 | 161 | 0 | 327 | 276 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Q Serve(g_s), s | 2.5 | 22.1 | 0.0 | 5.3 | 32.5 | 0.0 | 4.5 | 9.3 | 0.0 | 14.0 | 16.8 | 0.0 |
| Cycle Q Clear(g_c), s | 2.5 | 22.1 | 0.0 | 5.3 | 32.5 | 0.0 | 4.5 | 9.3 | 0.0 | 14.0 | 16.8 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 297 | 893 | | 430 | 939 | | 192 | 200 | | 305 | 316 | |
| V/C Ratio(X) | 0.27 | 0.57 | | 0.39 | 0.73 | | 0.43 | 0.80 | | 1.07 | 0.87 | |
| Avail Cap(c_a), veh/h | 451 | 893 | | 532 | 939 | | 320 | 406 | | 305 | 384 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 17.6 | 20.5 | 0.0 | 15.1 | 21.0 | 0.0 | 41.5 | 48.6 | 0.0 | 41.0 | 44.6 | 0.0 |
| Incr Delay (d2), s/veh | 0.5 | 2.7 | 0.0 | 0.6 | 5.0 | 0.0 | 1.5 | 7.3 | 0.0 | 72.4 | 17.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 9.4 | 0.0 | 2.0 | 13.8 | 0.0 | 2.0 | 4.6 | 0.0 | 7.9 | 8.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 18.0 | 23.1 | 0.0 | 15.6 | 26.0 | 0.0 | 43.0 | 55.9 | 0.0 | 113.4 | 61.6 | 0.0 |
| LnGrp LOS | B | C | | B | C | | D | E | | F | E | |
| Approach Vol, veh/h | | 592 | A | | 853 | A | | 244 | A | | 603 | A |
| Approach Delay, s/veh | | 22.4 | | | 23.9 | | | 51.5 | | | 89.7 | |
| Approach LOS | | C | | | C | | | D | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.2 | 63.3 | 12.1 | 25.7 | 13.5 | 60.0 | 20.0 | 17.8 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 34.5 | 6.5 | 18.8 | 7.3 | 24.1 | 16.0 | 11.3 | | | | |
| Green Ext Time (p_c), s | 0.1 | 4.2 | 0.1 | 0.6 | 0.2 | 3.1 | 0.0 | 0.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 43.8 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 17 | 10 | 646 | 631 | 1 |
| Future Vol, veh/h | 9 | 17 | 10 | 646 | 631 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 50 | 50 | 77 | 77 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 18 | 34 | 13 | 839 | 742 | 1 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1608 | 743 | 743 | 0 | 0 |
| Stage 1 | 743 | - | - | - | - |
| Stage 2 | 865 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 117 | 418 | 855 | - | - |
| Stage 1 | 474 | - | - | - | - |
| Stage 2 | 416 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 114 | 418 | 855 | - | - |
| Mov Cap-2 Maneuver | 114 | - | - | - | - |
| Stage 1 | 461 | - | - | - | - |
| Stage 2 | 416 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 26.7 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 855 | - | 217 | - | - |
| HCM Lane V/C Ratio | 0.015 | - | 0.24 | - | - |
| HCM Control Delay (s) | 9.3 | 0 | 26.7 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.9 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 55 | 6 | 10 | 668 | 594 | 44 |
| Future Vol, veh/h | 55 | 6 | 10 | 668 | 594 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 73 | 73 | 80 | 80 | 87 | 87 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 75 | 8 | 13 | 835 | 683 | 51 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1570 | 709 | 734 | 0 | 0 |
| Stage 1 | 709 | - | - | - | - |
| Stage 2 | 861 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 122 | 434 | 862 | - | - |
| Stage 1 | 488 | - | - | - | - |
| Stage 2 | 414 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 119 | 434 | 862 | - | - |
| Mov Cap-2 Maneuver | 119 | - | - | - | - |
| Stage 1 | 474 | - | - | - | - |
| Stage 2 | 414 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 74.9 | 0.1 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 862 | - | 128 | - | - |
| HCM Lane V/C Ratio | 0.015 | - | 0.653 | - | - |
| HCM Control Delay (s) | 9.2 | 0 | 74.9 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 3.5 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 700 | 26 | 5 | 609 | 23 | 3 |
| Future Vol, veh/h | 700 | 26 | 5 | 609 | 23 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 84 | 84 | 86 | 86 | 64 | 64 |
| Heavy Vehicles, % | 3 | 3 | 6 | 6 | 0 | 0 |
| Mvmt Flow | 833 | 31 | 6 | 708 | 36 | 5 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|----------------------|--------|---|--------|---|--------|-----|
| Conflicting Flow All | 0 | 0 | 864 | 0 | 1569 | 849 |
| Stage 1 | - | - | - | - | 849 | - |
| Stage 2 | - | - | - | - | 720 | - |
| Critical Hdwy | - | - | 4.16 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.254 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 762 | - | 123 | 364 |
| Stage 1 | - | - | - | - | 423 | - |
| Stage 2 | - | - | - | - | 486 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 762 | - | 121 | 364 |
| Mov Cap-2 Maneuver | - | - | - | - | 121 | - |
| Stage 1 | - | - | - | - | 423 | - |
| Stage 2 | - | - | - | - | 480 | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 44.4 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 131 | - | - | 762 | - |
| HCM Lane V/C Ratio | 0.31 | - | - | 0.008 | - |
| HCM Control Delay (s) | 44.4 | - | - | 9.8 | 0 |
| HCM Lane LOS | E | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.2 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 80 | 3 | 601 | 775 | 3 |
| Future Vol, veh/h | 5 | 80 | 3 | 601 | 775 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 65 | 65 | 93 | 93 | 77 | 77 |
| Heavy Vehicles, % | 5 | 5 | 4 | 4 | 3 | 3 |
| Mvmt Flow | 8 | 123 | 3 | 646 | 1006 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1660 | 1008 | 1010 | 0 | 0 |
| Stage 1 | 1008 | - | - | - | - |
| Stage 2 | 652 | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 105 | 288 | 678 | - | - |
| Stage 1 | 348 | - | - | - | - |
| Stage 2 | 513 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 104 | 288 | 678 | - | - |
| Mov Cap-2 Maneuver | 104 | - | - | - | - |
| Stage 1 | 346 | - | - | - | - |
| Stage 2 | 513 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 31.9 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 678 | - | 261 | - | - |
| HCM Lane V/C Ratio | 0.005 | - | 0.501 | - | - |
| HCM Control Delay (s) | 10.3 | 0 | 31.9 | - | - |
| HCM Lane LOS | B | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.6 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 57.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 148 | 117 | 377 | 183 | 115 | 497 |
| Future Vol, veh/h | 148 | 117 | 377 | 183 | 115 | 497 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 61 | 61 | 86 | 86 | 84 | 84 |
| Heavy Vehicles, % | 0 | 0 | 3 | 3 | 1 | 1 |
| Mvmt Flow | 243 | 192 | 438 | 213 | 137 | 592 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1304 | 438 | 0 | 0 | 651 |
| Stage 1 | 438 | - | - | - | - |
| Stage 2 | 866 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.11 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.209 |
| Pot Cap-1 Maneuver | ~ 179 | 623 | - | - | 940 |
| Stage 1 | 655 | - | - | - | - |
| Stage 2 | 415 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 140 | 623 | - | - | 940 |
| Mov Cap-2 Maneuver | ~ 140 | - | - | - | - |
| Stage 1 | 655 | - | - | - | - |
| Stage 2 | 325 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 236.5 | 0 | 1.8 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|--------|-------|-------|-----|
| Capacity (veh/h) | - | - | 140 | 623 | 940 | - |
| HCM Lane V/C Ratio | - | - | 1.733 | 0.308 | 0.146 | - |
| HCM Control Delay (s) | - | - | \$ 413 | 13.3 | 9.5 | 0 |
| HCM Lane LOS | - | - | F | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 17.9 | 1.3 | 0.5 | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Future Volume (vph) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 26.0 | 68.0 | 68.0 | 16.0 | 58.0 | 58.0 | 17.0 | 33.0 | 33.0 | 13.0 | 29.0 | 29.0 |
| Total Split (%) | 20.0% | 52.3% | 52.3% | 12.3% | 44.6% | 44.6% | 13.1% | 25.4% | 25.4% | 10.0% | 22.3% | 22.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 69.6 | 62.5 | 62.5 | 73.1 | 66.3 | 66.3 | 37.6 | 27.4 | 27.4 | 30.0 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.56 | 0.51 | 0.51 | 0.29 | 0.21 | 0.21 | 0.23 | 0.18 | 0.18 |
| v/c Ratio | 0.19 | 0.93 | 0.25 | 0.64 | 0.89 | 0.13 | 1.14 | 0.57 | 0.42 | 0.60 | 0.92 | 0.16 |
| Control Delay | 13.3 | 51.2 | 7.5 | 31.9 | 43.4 | 0.3 | 141.7 | 52.9 | 8.5 | 48.3 | 86.3 | 0.8 |
| 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 | 13.3 | 51.2 | 7.5 | 31.9 | 43.4 | 0.3 | 141.7 | 52.9 | 8.5 | 48.3 | 86.3 | 0.8 |
| LOS | B | D | A | C | D | A | F | D | A | D | F | A |
| Approach Delay | | 41.4 | | | 37.3 | | | 70.3 | | | 64.2 | |
| Approach LOS | | D | | | D | | | E | | | E | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 129.7 | |
| Natural Cycle: 110 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.14 | |
| Intersection Signal Delay: 49.6 | Intersection LOS: D |
| Intersection Capacity Utilization 90.2% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Future Volume (veh/h) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1767 | 1767 | 1767 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 40 | 784 | 193 | 126 | 785 | 0 | 227 | 217 | 201 | 151 | 301 | 67 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 9 | 9 | 9 | 10 | 10 | 10 | 6 | 6 | 6 | 5 | 5 | 5 |
| Cap, veh/h | 197 | 857 | 726 | 198 | 877 | 0 | 220 | 385 | 326 | 250 | 331 | 281 |
| Arrive On Green | 0.05 | 0.48 | 0.48 | 0.06 | 0.50 | 0.00 | 0.08 | 0.21 | 0.21 | 0.05 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 40 | 784 | 193 | 126 | 785 | 0 | 227 | 217 | 201 | 151 | 301 | 67 |
| Grp Sat Flow(s),veh/h/ln | 1682 | 1767 | 1497 | 1668 | 1752 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 1.5 | 53.0 | 9.8 | 4.8 | 52.3 | 0.0 | 10.8 | 13.8 | 15.3 | 7.0 | 20.8 | 4.8 |
| Cycle Q Clear(g_c), s | 1.5 | 53.0 | 9.8 | 4.8 | 52.3 | 0.0 | 10.8 | 13.8 | 15.3 | 7.0 | 20.8 | 4.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 197 | 857 | 726 | 198 | 877 | 0 | 220 | 385 | 326 | 250 | 331 | 281 |
| V/C Ratio(X) | 0.20 | 0.92 | 0.27 | 0.64 | 0.90 | 0.00 | 1.03 | 0.56 | 0.62 | 0.60 | 0.91 | 0.24 |
| Avail Cap(c_a), veh/h | 373 | 857 | 726 | 217 | 877 | 0 | 220 | 385 | 326 | 250 | 331 | 281 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.9 | 30.8 | 19.6 | 28.0 | 29.1 | 0.0 | 45.4 | 45.4 | 46.0 | 44.1 | 51.7 | 45.1 |
| Incr Delay (d2), s/veh | 0.5 | 16.0 | 0.9 | 5.3 | 13.6 | 0.0 | 69.3 | 5.9 | 8.4 | 4.1 | 30.8 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 24.8 | 3.5 | 2.0 | 23.7 | 0.0 | 6.2 | 6.7 | 6.5 | 1.4 | 12.1 | 2.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 25.4 | 46.8 | 20.5 | 33.3 | 42.8 | 0.0 | 114.7 | 51.3 | 54.4 | 48.2 | 82.5 | 47.1 |
| LnGrp LOS | C | D | C | C | D | | F | D | D | D | F | D |
| Approach Vol, veh/h | | 1017 | | | 911 | A | | 645 | | | 519 | |
| Approach Delay, s/veh | | 40.9 | | | 41.4 | | | 74.6 | | | 68.0 | |
| Approach LOS | | D | | | D | | | E | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.5 | 70.4 | 17.0 | 29.0 | 14.5 | 68.4 | 13.0 | 33.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 19.6 | 52.1 | * 11 | * 23 | 9.4 | * 63 | 7.0 | * 27 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 54.3 | 12.8 | 22.8 | 6.8 | 55.0 | 9.0 | 17.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 3.4 | 0.0 | 1.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 52.6 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | TR | L | T | R |
| Maximum Queue (ft) | 365 | 576 | 513 | 195 | 735 | 565 | 175 | 306 | 143 | 266 | 144 |
| Average Queue (ft) | 158 | 328 | 206 | 175 | 712 | 194 | 153 | 121 | 34 | 69 | 53 |
| 95th Queue (ft) | 375 | 516 | 355 | 225 | 786 | 614 | 195 | 276 | 82 | 176 | 121 |
| Link Distance (ft) | | 929 | 929 | | 719 | | | 620 | | 144 | |
| Upstream Blk Time (%) | | | | | 30 | | | | 0 | 2 | 0 |
| Queuing Penalty (veh) | | | | | 405 | | | | 0 | 0 | 0 |
| Storage Bay Dist (ft) | 315 | | | 145 | | 340 | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 13 | | 24 | 55 | | 24 | 1 | 0 | 2 | 0 |
| Queuing Penalty (veh) | | 14 | | 248 | 210 | | 35 | 2 | 0 | 4 | 0 |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | WB | B60 | SB |
|-----------------------|-----|------|------|-----|
| Directions Served | LT | TR | T | LR |
| Maximum Queue (ft) | 617 | 1595 | 255 | 386 |
| Average Queue (ft) | 115 | 1159 | 39 | 291 |
| 95th Queue (ft) | 394 | 1907 | 166 | 478 |
| Link Distance (ft) | 719 | 1487 | 2245 | 352 |
| Upstream Blk Time (%) | | 17 | | 60 |
| Queuing Penalty (veh) | | 159 | | 0 |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | NB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LT | LTR | LTR |
| Maximum Queue (ft) | 113 | 109 | 98 |
| Average Queue (ft) | 10 | 16 | 48 |
| 95th Queue (ft) | 56 | 51 | 80 |
| Link Distance (ft) | 1434 | 517 | 824 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | 1 | | |
| Queuing Penalty (veh) | 0 | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | WB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LT | TR | LR |
| Maximum Queue (ft) | 193 | 40 | 707 |
| Average Queue (ft) | 45 | 1 | 616 |
| 95th Queue (ft) | 139 | 14 | 758 |
| Link Distance (ft) | 3846 | 573 | 655 |
| Upstream Blk Time (%) | | | 45 |
| Queuing Penalty (veh) | | | 0 |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 202 | 193 | 86 | 46 |
| Average Queue (ft) | 14 | 9 | 24 | 10 |
| 95th Queue (ft) | 89 | 68 | 49 | 36 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 26 | 109 |
| Average Queue (ft) | 2 | 42 |
| 95th Queue (ft) | 12 | 85 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 47 |
| Average Queue (ft) | 4 | 14 |
| 95th Queue (ft) | 26 | 37 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 288 | 160 |
| Average Queue (ft) | 17 | 47 |
| 95th Queue (ft) | 77 | 91 |
| Link Distance (ft) | 2510 | 472 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 437 | 440 | 59 | 158 |
| Average Queue (ft) | 42 | 28 | 12 | 39 |
| 95th Queue (ft) | 194 | 170 | 40 | 90 |
| Link Distance (ft) | 4030 | 2936 | 637 | 210 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 943 | 350 | 437 | 225 | 773 | 420 | 170 | 1428 | 525 |
| Average Queue (ft) | 354 | 920 | 153 | 244 | 174 | 320 | 162 | 110 | 1230 | 503 |
| 95th Queue (ft) | 477 | 929 | 269 | 370 | 273 | 607 | 369 | 207 | 1734 | 638 |
| Link Distance (ft) | | 904 | | 677 | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | 62 | | | | | | | 41 | |
| Queuing Penalty (veh) | | 0 | | | | | | | 0 | |
| Storage Bay Dist (ft) | 335 | | 300 | | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 6 | 62 | 0 | 6 | 9 | 30 | 1 | 13 | 67 | |
| Queuing Penalty (veh) | 47 | 235 | 0 | 19 | 61 | 137 | 4 | 115 | 380 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 129 | 130 | 382 |
| Average Queue (ft) | 68 | 24 | 16 |
| 95th Queue (ft) | 122 | 78 | 133 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 84 |
| Average Queue (ft) | 7 | 25 |
| 95th Queue (ft) | 34 | 57 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 411 | 30 |
| Average Queue (ft) | 129 | 2 |
| 95th Queue (ft) | 291 | 14 |
| Link Distance (ft) | 614 | 581 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | L | T |
| Maximum Queue (ft) | 225 | 468 | 225 | 244 | 375 | 244 | 120 | 184 | 237 | 289 |
| Average Queue (ft) | 42 | 190 | 32 | 66 | 195 | 26 | 49 | 79 | 149 | 147 |
| 95th Queue (ft) | 111 | 342 | 161 | 158 | 308 | 150 | 99 | 153 | 235 | 233 |
| Link Distance (ft) | | 3762 | | | 1100 | | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 195 | 185 | | 190 | |
| Storage Blk Time (%) | | 8 | | | 6 | | | 0 | 3 | 3 |
| Queuing Penalty (veh) | | 16 | | | 22 | | | 0 | 8 | 11 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 54 | 99 |
| Average Queue (ft) | 18 | 6 |
| 95th Queue (ft) | 46 | 40 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 70 | 119 |
| Average Queue (ft) | 23 | 22 |
| 95th Queue (ft) | 52 | 84 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 75 | 49 |
| Average Queue (ft) | 2 | 21 |
| 95th Queue (ft) | 18 | 49 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 75 | 77 |
| Average Queue (ft) | 47 | 4 |
| 95th Queue (ft) | 76 | 29 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | NB | SB |
|-----------------------|-----|-----|------|
| Directions Served | L | R | LT |
| Maximum Queue (ft) | 151 | 22 | 268 |
| Average Queue (ft) | 75 | 1 | 73 |
| 95th Queue (ft) | 132 | 8 | 188 |
| Link Distance (ft) | 484 | | 1053 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 200 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 229 | 735 | 310 | 260 | 1175 | 220 | 279 | 416 | 188 | 270 | 828 | 100 |
| Average Queue (ft) | 38 | 503 | 169 | 137 | 400 | 62 | 203 | 215 | 100 | 186 | 452 | 47 |
| 95th Queue (ft) | 130 | 778 | 387 | 273 | 838 | 225 | 321 | 392 | 171 | 315 | 873 | 116 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | 788 | |
| Upstream Blk Time (%) | | 5 | | | | | | | | | 21 | |
| Queuing Penalty (veh) | | 0 | | | | | | | | | 0 | |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 40 | | 4 | 24 | 0 | 12 | 2 | | 2 | 78 | 6 |
| Queuing Penalty (veh) | | 85 | | 32 | 52 | 0 | 47 | 7 | | 5 | 150 | 23 |

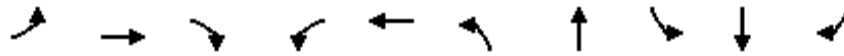
Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 2534 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 1118 | 511 | 160 | 1022 | 678 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 1118 | 511 | 160 | 1022 | 678 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 17.0 | 24.2 | 24.2 |
| Total Split (s) | 15.0 | 78.0 | 78.0 | 15.0 | 78.0 | 20.0 | 37.0 | 20.0 | 37.0 | 37.0 |
| Total Split (%) | 10.0% | 52.0% | 52.0% | 10.0% | 52.0% | 13.3% | 24.7% | 13.3% | 24.7% | 24.7% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 78.1 | 71.1 | 71.1 | 84.3 | 78.4 | 46.0 | 30.8 | 44.6 | 30.8 | 30.8 |
| Actuated g/C Ratio | 0.52 | 0.47 | 0.47 | 0.56 | 0.52 | 0.31 | 0.21 | 0.30 | 0.21 | 0.21 |
| v/c Ratio | 0.17 | 1.32 | 0.61 | 1.25 | 1.24 | 1.57 | 0.47 | 0.05 | 0.04 | 0.05 |
| Control Delay | 16.9 | 186.0 | 19.2 | 186.0 | 147.4 | 302.3 | 9.8 | 33.8 | 48.2 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 16.9 | 186.0 | 19.2 | 186.0 | 147.4 | 302.3 | 9.8 | 33.8 | 48.2 | 0.2 |
| LOS | B | F | B | F | F | F | A | C | D | A |
| Approach Delay | | 132.2 | | | 152.6 | | 229.8 | | 23.5 | |
| Approach LOS | | F | | | F | | F | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 150

Natural Cycle: 180

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.57

Intersection Signal Delay: 160.7

Intersection LOS: F

Intersection Capacity Utilization 128.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| | | | |
|------------|------------|------------|------------|
| Ø1 15 s | Ø2 78 s | Ø3 20 s | Ø4 37 s |
| Ø5 15 s | Ø6 78 s | Ø7 20 s | Ø8 37 s |

HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 1118 | 511 | 160 | 1022 | 0 | 678 | 7 | 216 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 1118 | 511 | 160 | 1022 | 0 | 678 | 7 | 216 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 1177 | 538 | 188 | 1202 | 0 | 737 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 83 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| Arrive On Green | 0.02 | 0.47 | 0.47 | 0.06 | 0.51 | 0.00 | 0.10 | 0.21 | 0.00 | 0.09 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 1177 | 538 | 188 | 1202 | 0 | 737 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 0.9 | 71.1 | 40.1 | 8.8 | 77.0 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.9 | 1.7 |
| Cycle Q Clear(g_c), s | 0.9 | 71.1 | 40.1 | 8.8 | 77.0 | 0.0 | 14.5 | 0.5 | 0.0 | 0.9 | 0.9 | 1.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 83 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| V/C Ratio(X) | 0.25 | 1.32 | 0.71 | 1.23 | 1.25 | 0.00 | 1.48 | 0.02 | | 0.03 | 0.04 | 0.07 |
| Avail Cap(c_a), veh/h | 153 | 894 | 757 | 153 | 960 | 813 | 497 | 387 | | 503 | 390 | 331 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.3 | 39.5 | 31.3 | 47.7 | 36.5 | 0.0 | 53.4 | 47.6 | 0.0 | 37.4 | 47.7 | 48.0 |
| Incr Delay (d2), s/veh | 1.6 | 150.7 | 3.1 | 148.8 | 122.1 | 0.0 | 227.4 | 0.1 | 0.0 | 0.1 | 0.2 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 68.6 | 15.9 | 12.1 | 65.6 | 0.0 | 43.4 | 0.3 | 0.0 | 0.4 | 0.4 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.9 | 190.1 | 34.4 | 196.4 | 158.6 | 0.0 | 280.8 | 47.7 | 0.0 | 37.5 | 47.9 | 48.4 |
| LnGrp LOS | D | F | C | F | F | A | F | D | | D | D | D |
| Approach Vol, veh/h | | 1736 | | | 1390 | | | 745 | A | | 52 | |
| Approach Delay, s/veh | | 140.0 | | | 163.8 | | | 278.3 | | | 44.9 | |
| Approach LOS | | F | | | F | | | F | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 83.9 | 20.0 | 37.0 | 15.0 | 78.0 | 20.0 | 37.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 71.1 | 14.5 | * 31 | * 8.8 | 71.1 | * 14 | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.9 | 79.0 | 16.5 | 3.7 | 10.8 | 73.1 | 2.9 | 2.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|-------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 173.4 | | | | | | | | | | | |
| HCM 6th LOS | F | | | | | | | | | | | |

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 28 | 1299 | 1142 | 7 | 1 | 23 |
| Future Vol, veh/h | 28 | 1299 | 1142 | 7 | 1 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 87 | 87 | 60 | 60 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 32 | 1476 | 1313 | 8 | 2 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|------|------|
| Conflicting Flow All | 1321 | 0 | 0 | 2857 | 1317 |
| Stage 1 | - | - | - | 1317 | - |
| Stage 2 | - | - | - | 1540 | - |
| Critical Hdwy | 4.11 | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.209 | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 526 | - | - | 19 | 194 |
| Stage 1 | - | - | - | 253 | - |
| Stage 2 | - | - | - | 197 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 526 | - | - | 13 | 194 |
| Mov Cap-2 Maneuver | - | - | - | 13 | - |
| Stage 1 | - | - | - | 167 | - |
| Stage 2 | - | - | - | 197 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 47.8 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 526 | - | - | - | 123 |
| HCM Lane V/C Ratio | 0.06 | - | - | - | 0.325 |
| HCM Control Delay (s) | 12.3 | 0 | - | - | 47.8 |
| HCM Lane LOS | B | A | - | - | E |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 1.3 |

HCM 6th TWSC

3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 68 | 895 | 17 | 5 | 975 | 23 | 8 | 0 | 2 | 9 | 5 | 42 |
| Future Vol, veh/h | 68 | 895 | 17 | 5 | 975 | 23 | 8 | 0 | 2 | 9 | 5 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 75 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 91 | 91 | 91 | 50 | 50 | 50 | 93 | 93 | 93 |
| Heavy Vehicles, % | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 77 | 1017 | 19 | 5 | 1071 | 25 | 16 | 0 | 4 | 10 | 5 | 45 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 1096 | 0 | 0 | 1036 | 0 | 0 | 2290 | 2277 | 1017 | 2277 | 2284 | 1084 |
| Stage 1 | - | - | - | - | - | - | 1171 | 1171 | - | 1094 | 1094 | - |
| Stage 2 | - | - | - | - | - | - | 1119 | 1106 | - | 1183 | 1190 | - |
| Critical Hdwy | 4.11 | - | - | 4.13 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.227 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 641 | - | - | 667 | - | - | 28 | 41 | 291 | 29 | 40 | 266 |
| Stage 1 | - | - | - | - | - | - | 237 | 269 | - | 262 | 292 | - |
| Stage 2 | - | - | - | - | - | - | 253 | 289 | - | 233 | 263 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 641 | - | - | 667 | - | - | ~ 15 | 29 | 291 | 22 | 28 | 266 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 15 | 29 | - | 22 | 28 | - |
| Stage 1 | - | - | - | - | - | - | 169 | 192 | - | 187 | 286 | - |
| Stage 2 | - | - | - | - | - | - | 202 | 284 | - | 164 | 188 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----------|-------|
| HCM Control Delay, s | 0.8 | 0.1 | \$ 506.1 | 147.6 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|----------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 19 | 641 | - | - | 667 | - | - | 75 |
| HCM Lane V/C Ratio | 1.053 | 0.121 | - | - | 0.008 | - | - | 0.803 |
| HCM Control Delay (s) | \$ 506.1 | 11.4 | 0 | - | 10.4 | 0 | - | 147.6 |
| HCM Lane LOS | F | B | A | - | B | A | - | F |
| HCM 95th %tile Q(veh) | 2.8 | 0.4 | - | - | 0 | - | - | 3.9 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 56.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 104 | 826 | 916 | 129 | 68 | 49 |
| Future Vol, veh/h | 104 | 826 | 916 | 129 | 68 | 49 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 93 | 93 | 82 | 82 |
| Heavy Vehicles, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Mvmt Flow | 109 | 869 | 985 | 139 | 83 | 60 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1124 | 0 | - | 0 | 2142 |
| Stage 1 | - | - | - | - | 1055 |
| Stage 2 | - | - | - | - | 1087 |
| Critical Hdwy | 4.11 | - | - | - | 6.45 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 |
| Follow-up Hdwy | 2.209 | - | - | - | 3.545 |
| Pot Cap-1 Maneuver | 625 | - | - | - | ~ 53 |
| Stage 1 | - | - | - | - | 331 |
| Stage 2 | - | - | - | - | 319 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 625 | - | - | - | ~ 35 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 35 |
| Stage 1 | - | - | - | - | 219 |
| Stage 2 | - | - | - | - | 319 |

| Approach | EB | WB | SB |
|----------------------|-----|----|--------|
| HCM Control Delay, s | 1.3 | 0 | \$ 882 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|--------|
| Capacity (veh/h) | 625 | - | - | - | 55 |
| HCM Lane V/C Ratio | 0.175 | - | - | - | 2.594 |
| HCM Control Delay (s) | 12 | 0 | - | - | \$ 882 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.6 | - | - | - | 14.6 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 12.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 19 | 858 | 37 | 21 | 964 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Future Vol, veh/h | 19 | 858 | 37 | 21 | 964 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 91 | 91 | 91 | 73 | 73 | 73 | 50 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 22 | 1009 | 44 | 23 | 1059 | 5 | 37 | 3 | 12 | 6 | 0 | 14 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|------|------|
| Conflicting Flow All | 1064 | 0 | 0 | 1053 | 0 | 0 | 2190 | 2185 | 1031 | 2191 | 2205 | 1062 |
| Stage 1 | - | - | - | - | - | - | 1075 | 1075 | - | 1108 | 1108 | - |
| Stage 2 | - | - | - | - | - | - | 1115 | 1110 | - | 1083 | 1097 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.13 | 6.53 | 6.23 | 7.2 | 6.6 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.527 | 4.027 | 3.327 | 3.59 | 4.09 | 3.39 |
| Pot Cap-1 Maneuver | 659 | - | - | 661 | - | - | ~ 32 | 45 | 282 | 31 | 42 | 262 |
| Stage 1 | - | - | - | - | - | - | 265 | 295 | - | 246 | 276 | - |
| Stage 2 | - | - | - | - | - | - | 251 | 284 | - | 254 | 279 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 659 | - | - | 661 | - | - | ~ 27 | 38 | 282 | 25 | 35 | 262 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 27 | 38 | - | 25 | 35 | - |
| Stage 1 | - | - | - | - | - | - | 244 | 271 | - | 226 | 253 | - |
| Stage 2 | - | - | - | - | - | - | 217 | 260 | - | 221 | 256 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----------|------|
| HCM Control Delay, s | 0.2 | 0.2 | \$ 501.9 | 78.7 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|----------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 35 | 659 | - | - | 661 | - | - | 68 |
| HCM Lane V/C Ratio | 1.487 | 0.034 | - | - | 0.035 | - | - | 0.294 |
| HCM Control Delay (s) | \$ 501.9 | 10.7 | 0 | - | 10.6 | 0 | - | 78.7 |
| HCM Lane LOS | F | B | A | - | B | A | - | F |
| HCM 95th %tile Q(veh) | 5.6 | 0.1 | - | - | 0.1 | - | - | 1.1 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

6: E Cherokee Dr & Avery Creek Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 54 | 811 | 839 | 57 | 28 | 43 |
| Future Vol, veh/h | 54 | 811 | 839 | 57 | 28 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 88 | 88 | 71 | 71 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 58 | 872 | 953 | 65 | 39 | 61 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 1018 | 0 | - | 0 | 1941 953 |
| Stage 1 | - | - | - | - | 953 - |
| Stage 2 | - | - | - | - | 988 - |
| Critical Hdwy | 4.11 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 685 | - | - | - | 71 313 |
| Stage 1 | - | - | - | - | 373 - |
| Stage 2 | - | - | - | - | 359 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 685 | - | - | - | 59 313 |
| Mov Cap-2 Maneuver | - | - | - | - | 59 - |
| Stage 1 | - | - | - | - | 312 - |
| Stage 2 | - | - | - | - | 359 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.7 | 0 | 119 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 685 | - | - | - | 116 |
| HCM Lane V/C Ratio | 0.085 | - | - | - | 0.862 |
| HCM Control Delay (s) | 10.7 | 0 | - | - | 119 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 5.2 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|--------|------|--------|-------|--------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 838 | 12 | 8 | 908 | 7 | 11 |
| Future Vol, veh/h | 838 | 12 | 8 | 908 | 7 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 87 | 87 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 901 | 13 | 9 | 1044 | 14 | 22 |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 914 | 0 | 1963 | 901 |
| Stage 1 | - | - | - | - | 901 | - |
| Stage 2 | - | - | - | - | 1062 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 746 | - | 70 | 340 |
| Stage 1 | - | - | - | - | 400 | - |
| Stage 2 | - | - | - | - | 335 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 746 | - | 68 | 340 |
| Mov Cap-2 Maneuver | - | - | - | - | 68 | - |
| Stage 1 | - | - | - | - | 400 | - |
| Stage 2 | - | - | - | - | 325 | - |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.1 | | 41.8 | |
| HCM LOS | | | | | E | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 133 | - | - | 746 | - | |
| HCM Lane V/C Ratio | 0.271 | - | - | 0.012 | - | |
| HCM Control Delay (s) | 41.8 | - | - | 9.9 | 0 | |
| HCM Lane LOS | E | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 27.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | ↕ | ↕ | |
| Traffic Vol, veh/h | 58 | 789 | 847 | 44 | 43 | 64 |
| Future Vol, veh/h | 58 | 789 | 847 | 44 | 43 | 64 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 180 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 89 | 89 | 64 | 64 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 1 | 1 |
| Mvmt Flow | 65 | 887 | 952 | 49 | 67 | 100 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 1001 | 0 | - | 0 | 1969 952 |
| Stage 1 | - | - | - | - | 952 - |
| Stage 2 | - | - | - | - | 1017 - |
| Critical Hdwy | 4.11 | - | - | - | 6.41 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.41 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.41 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.509 3.309 |
| Pot Cap-1 Maneuver | 696 | - | - | - | 69 316 |
| Stage 1 | - | - | - | - | 377 - |
| Stage 2 | - | - | - | - | 351 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 696 | - | - | - | ~ 56 316 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 56 - |
| Stage 1 | - | - | - | - | 308 - |
| Stage 2 | - | - | - | - | 351 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 0.7 | 0 | \$ 344.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 696 | - | - | - | 110 |
| HCM Lane V/C Ratio | 0.094 | - | - | - | 1.52 |
| HCM Control Delay (s) | 10.7 | 0 | - | - | \$ 344.6 |
| HCM Lane LOS | B | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 12.3 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 64 | 892 | 3 | 3 | 892 | 9 | 0 | 0 | 7 | 0 | 1 | 71 |
| Future Vol, veh/h | 64 | 892 | 3 | 3 | 892 | 9 | 0 | 0 | 7 | 0 | 1 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 96 | 96 | 96 | 42 | 42 | 42 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 69 | 959 | 3 | 3 | 929 | 9 | 0 | 0 | 17 | 0 | 1 | 81 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 938 | 0 | 0 | 962 | 0 | 0 | 2080 | 2043 | 961 | 2047 | 2040 | 934 |
| Stage 1 | - | - | - | - | - | - | 1099 | 1099 | - | 940 | 940 | - |
| Stage 2 | - | - | - | - | - | - | 981 | 944 | - | 1107 | 1100 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 735 | - | - | 715 | - | - | 40 | 57 | 314 | 42 | 57 | 325 |
| Stage 1 | - | - | - | - | - | - | 260 | 291 | - | 319 | 345 | - |
| Stage 2 | - | - | - | - | - | - | 303 | 344 | - | 257 | 290 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 735 | - | - | 715 | - | - | 25 | 45 | 314 | 33 | 45 | 325 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 25 | 45 | - | 33 | 45 | - |
| Stage 1 | - | - | - | - | - | - | 207 | 232 | - | 255 | 342 | - |
| Stage 2 | - | - | - | - | - | - | 225 | 341 | - | 194 | 231 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.7 | 0 | 17.1 | 21.5 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 314 | 735 | - | - | 715 | - | - | 299 |
| HCM Lane V/C Ratio | 0.053 | 0.094 | - | - | 0.004 | - | - | 0.274 |
| HCM Control Delay (s) | 17.1 | 10.4 | 0 | - | 10.1 | 0 | - | 21.5 |
| HCM Lane LOS | C | B | A | - | B | A | - | C |
| HCM 95th %tile Q(veh) | 0.2 | 0.3 | - | - | 0 | - | - | 1.1 |

Timings

10: E Cherokee Dr & Hickory Rd

07/06/2020

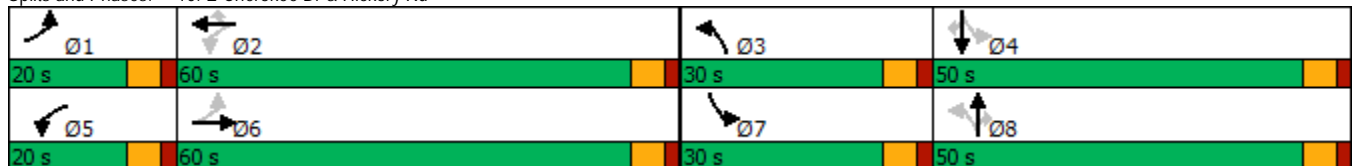


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 324 | 545 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Future Volume (vph) | 324 | 545 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 20.0 | 60.0 | 60.0 | 30.0 | 50.0 | 50.0 | 30.0 | 50.0 | 50.0 |
| Total Split (%) | 12.5% | 37.5% | 12.5% | 37.5% | 37.5% | 18.8% | 31.3% | 31.3% | 18.8% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 68.0 | 54.0 | 68.0 | 54.0 | 54.0 | 58.1 | 45.5 | 45.5 | 55.2 | 44.0 | 44.0 |
| Actuated g/C Ratio | 0.46 | 0.36 | 0.46 | 0.36 | 0.36 | 0.39 | 0.31 | 0.31 | 0.37 | 0.30 | 0.30 |
| v/c Ratio | 1.69 | 1.07 | 1.82 | 1.33 | 0.25 | 0.68 | 0.82 | 0.57 | 0.48 | 0.97 | 0.57 |
| Control Delay | 356.2 | 99.2 | 411.8 | 195.3 | 13.9 | 48.7 | 61.2 | 18.6 | 34.1 | 82.1 | 15.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 356.2 | 99.2 | 411.8 | 195.3 | 13.9 | 48.7 | 61.2 | 18.6 | 34.1 | 82.1 | 15.0 |
| LOS | F | F | F | F | B | D | E | B | C | F | B |
| Approach Delay | | 186.1 | | 234.1 | | | 43.2 | | | 51.9 | |
| Approach LOS | | F | | F | | | D | | | D | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 148.7 | |
| Natural Cycle: 180 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.82 | |
| Intersection Signal Delay: 140.4 | Intersection LOS: F |
| Intersection Capacity Utilization 114.5% | ICU Level of Service H |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Future Volume (veh/h) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 364 | 612 | 0 | 396 | 906 | 0 | 137 | 472 | 374 | 108 | 532 | 384 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Cap, veh/h | 220 | 693 | | 274 | 698 | | 185 | 591 | 500 | 204 | 564 | 478 |
| Arrive On Green | 0.10 | 0.37 | 0.00 | 0.10 | 0.37 | 0.00 | 0.07 | 0.31 | 0.31 | 0.06 | 0.30 | 0.30 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 364 | 612 | 0 | 396 | 906 | 0 | 137 | 472 | 374 | 108 | 532 | 384 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 14.0 | 44.7 | 0.0 | 14.0 | 54.0 | 0.0 | 7.6 | 33.5 | 30.6 | 6.0 | 40.5 | 32.6 |
| Cycle Q Clear(g_c), s | 14.0 | 44.7 | 0.0 | 14.0 | 54.0 | 0.0 | 7.6 | 33.5 | 30.6 | 6.0 | 40.5 | 32.6 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 220 | 693 | | 274 | 698 | | 185 | 591 | 500 | 204 | 564 | 478 |
| V/C Ratio(X) | 1.65 | 0.88 | | 1.45 | 1.30 | | 0.74 | 0.80 | 0.75 | 0.53 | 0.94 | 0.80 |
| Avail Cap(c_a), veh/h | 220 | 693 | | 274 | 698 | | 360 | 591 | 500 | 397 | 564 | 478 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.9 | 43.0 | 0.0 | 33.7 | 45.9 | 0.0 | 37.9 | 45.9 | 44.9 | 36.2 | 49.7 | 46.9 |
| Incr Delay (d2), s/veh | 312.7 | 15.3 | 0.0 | 219.9 | 144.5 | 0.0 | 5.7 | 8.7 | 7.3 | 2.1 | 26.1 | 13.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 23.7 | 23.1 | 0.0 | 22.6 | 52.6 | 0.0 | 3.6 | 17.0 | 13.1 | 2.7 | 22.8 | 14.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 359.6 | 58.3 | 0.0 | 253.5 | 190.4 | 0.0 | 43.5 | 54.6 | 52.2 | 38.3 | 75.8 | 60.3 |
| LnGrp LOS | F | E | | F | F | | D | D | D | D | E | E |
| Approach Vol, veh/h | | 976 | A | | 1302 | A | | 983 | | | 1024 | |
| Approach Delay, s/veh | | 170.7 | | | 209.6 | | | 52.1 | | | 66.0 | |
| Approach LOS | | F | | | F | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 20.0 | 60.0 | 15.8 | 50.0 | 20.0 | 60.0 | 14.2 | 51.7 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 24.0 | 44.0 | 14.0 | 54.0 | 24.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.0 | 56.0 | 9.6 | 42.5 | 16.0 | 46.7 | 8.0 | 35.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.3 | 1.1 | 0.0 | 3.5 | 0.2 | 4.7 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 130.3 |
| HCM 6th LOS | F |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 18.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 123 | 75 | 85 | 547 | 514 | 135 |
| Future Vol, veh/h | 123 | 75 | 85 | 547 | 514 | 135 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 93 | 93 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 135 | 82 | 91 | 588 | 565 | 148 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1409 | 639 | 713 | 0 | 0 |
| Stage 1 | 639 | - | - | - | - |
| Stage 2 | 770 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 154 | 478 | 896 | - | - |
| Stage 1 | 528 | - | - | - | - |
| Stage 2 | 459 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 131 | 478 | 896 | - | - |
| Mov Cap-2 Maneuver | ~ 131 | - | - | - | - |
| Stage 1 | 448 | - | - | - | - |
| Stage 2 | 459 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|-----|----|
| HCM Control Delay, s | 134.7 | 1.3 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 896 | - | 202 | - | - |
| HCM Lane V/C Ratio | 0.102 | - | 1.077 | - | - |
| HCM Control Delay (s) | 9.5 | 0 | 134.7 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 10.1 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 57 | 616 | 605 | 3 | 3 | 42 |
| Future Vol, veh/h | 57 | 616 | 605 | 3 | 3 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 61 | 655 | 651 | 3 | 4 | 51 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 654 | 0 | - | 0 | 1430 653 |
| Stage 1 | - | - | - | - | 653 - |
| Stage 2 | - | - | - | - | 777 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 943 | - | - | - | 150 471 |
| Stage 1 | - | - | - | - | 522 - |
| Stage 2 | - | - | - | - | 457 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 943 | - | - | - | 135 471 |
| Mov Cap-2 Maneuver | - | - | - | - | 135 - |
| Stage 1 | - | - | - | - | 469 - |
| Stage 2 | - | - | - | - | 457 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.8 | 0 | 15.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 943 | - | - | - | 404 |
| HCM Lane V/C Ratio | 0.064 | - | - | - | 0.134 |
| HCM Control Delay (s) | 9.1 | 0 | - | - | 15.3 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.5 |

HCM 6th TWSC
13: E Cherokee Dr & Avery Rd/Thomas Rd

07/06/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 101.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 185 | 7 | 3 | 5 | 6 | 12 | 1 | 624 | 3 | 5 | 600 | 288 |
| Future Vol, veh/h | 185 | 7 | 3 | 5 | 6 | 12 | 1 | 624 | 3 | 5 | 600 | 288 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 75 | 75 | 75 | 94 | 94 | 94 | 92 | 92 | 92 |
| Heavy Vehicles, % | 8 | 8 | 8 | 7 | 7 | 7 | 0 | 0 | 0 | 2 | 2 | 2 |
| Mvmt Flow | 220 | 8 | 4 | 7 | 8 | 16 | 1 | 664 | 3 | 5 | 652 | 313 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-------|-------|--------|---|---|--------|---|---|
| Conflicting Flow All | 1499 | 1488 | 809 | 1493 | 1643 | 666 | 965 | 0 | 0 | 667 | 0 | 0 |
| Stage 1 | 819 | 819 | - | 668 | 668 | - | - | - | - | - | - | - |
| Stage 2 | 680 | 669 | - | 825 | 975 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.18 | 6.58 | 6.28 | 7.17 | 6.57 | 6.27 | 4.1 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.572 | 4.072 | 3.372 | 3.563 | 4.063 | 3.363 | 2.2 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 97 | 120 | 371 | 99 | 97 | 451 | 722 | - | - | 923 | - | - |
| Stage 1 | 361 | 381 | - | 439 | 449 | - | - | - | - | - | - | - |
| Stage 2 | 431 | 447 | - | 360 | 323 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 87 | 118 | 371 | 92 | 96 | 451 | 722 | - | - | 923 | - | - |
| Mov Cap-2 Maneuver | ~ 87 | 118 | - | 92 | 96 | - | - | - | - | - | - | - |
| Stage 1 | 360 | 376 | - | 438 | 448 | - | - | - | - | - | - | - |
| Stage 2 | 407 | 446 | - | 344 | 319 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|----------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | \$ 829.7 | | | 32.8 | | | 0 | | | 0 | | |
| HCM LOS | F | | | D | | | | | | | | |

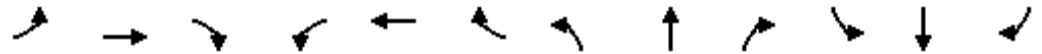
| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|----------|-------|-------|-----|-----|
| Capacity (veh/h) | 722 | - | - | 89 | 160 | 923 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 2.608 | 0.192 | 0.006 | - | - |
| HCM Control Delay (s) | 10 | 0 | - | \$ 829.7 | 32.8 | 8.9 | 0 | - |
| HCM Lane LOS | A | A | - | F | D | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 21.9 | 0.7 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

07/06/2020

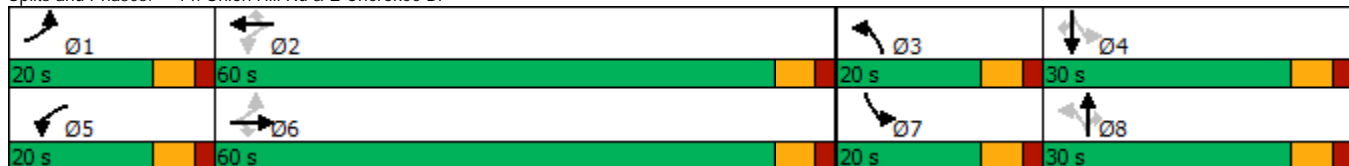


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Future Volume (vph) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 68.4 | 64.3 | 64.3 | 60.3 | 54.2 | 54.2 | 34.0 | 20.0 | 20.0 | 29.4 | 17.7 | 17.7 |
| Actuated g/C Ratio | 0.58 | 0.54 | 0.54 | 0.51 | 0.46 | 0.46 | 0.29 | 0.17 | 0.17 | 0.25 | 0.15 | 0.15 |
| v/c Ratio | 0.31 | 0.65 | 0.08 | 0.06 | 0.67 | 0.11 | 0.76 | 0.78 | 0.14 | 0.50 | 0.47 | 0.40 |
| Control Delay | 14.5 | 25.8 | 0.2 | 12.9 | 31.3 | 1.6 | 48.5 | 65.6 | 0.8 | 36.7 | 51.9 | 10.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.5 | 25.8 | 0.2 | 12.9 | 31.3 | 1.6 | 48.5 | 65.6 | 0.8 | 36.7 | 51.9 | 10.4 |
| LOS | B | C | A | B | C | A | D | E | A | D | D | B |
| Approach Delay | | 22.2 | | | 27.0 | | | 51.6 | | | 32.3 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 118.8 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 32.0 | Intersection LOS: C |
| Intersection Capacity Utilization 76.5% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Future Volume (veh/h) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 108 | 662 | 0 | 18 | 577 | 0 | 283 | 247 | 0 | 134 | 132 | 0 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.90 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cap, veh/h | 384 | 995 | | 308 | 943 | | 348 | 288 | | 244 | 202 | |
| Arrive On Green | 0.05 | 0.53 | 0.00 | 0.02 | 0.50 | 0.00 | 0.13 | 0.15 | 0.00 | 0.08 | 0.11 | 0.00 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 108 | 662 | 0 | 18 | 577 | 0 | 283 | 247 | 0 | 134 | 132 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 3.2 | 27.8 | 0.0 | 0.5 | 23.9 | 0.0 | 14.0 | 13.9 | 0.0 | 7.1 | 7.3 | 0.0 |
| Cycle Q Clear(g_c), s | 3.2 | 27.8 | 0.0 | 0.5 | 23.9 | 0.0 | 14.0 | 13.9 | 0.0 | 7.1 | 7.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 384 | 995 | | 308 | 943 | | 348 | 288 | | 244 | 202 | |
| V/C Ratio(X) | 0.28 | 0.67 | | 0.06 | 0.61 | | 0.81 | 0.86 | | 0.55 | 0.65 | |
| Avail Cap(c_a), veh/h | 530 | 995 | | 513 | 943 | | 348 | 416 | | 326 | 416 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 15.1 | 18.7 | 0.0 | 15.9 | 19.8 | 0.0 | 38.0 | 44.9 | 0.0 | 38.9 | 46.6 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 3.5 | 0.0 | 0.1 | 3.0 | 0.0 | 13.7 | 11.6 | 0.0 | 1.9 | 3.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 11.9 | 0.0 | 0.2 | 10.4 | 0.0 | 7.8 | 7.2 | 0.0 | 3.2 | 3.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.5 | 22.2 | 0.0 | 16.0 | 22.8 | 0.0 | 51.6 | 56.5 | 0.0 | 40.8 | 50.1 | 0.0 |
| LnGrp LOS | B | C | | B | C | | D | E | | D | D | |
| Approach Vol, veh/h | | 770 | A | | 595 | A | | 530 | A | | 266 | A |
| Approach Delay, s/veh | | 21.3 | | | 22.6 | | | 53.9 | | | 45.4 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.1 | 60.0 | 20.0 | 17.7 | 7.7 | 63.4 | 15.1 | 22.6 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 5.2 | 25.9 | 16.0 | 9.3 | 2.5 | 29.8 | 9.1 | 15.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.6 | 0.0 | 0.5 | 0.0 | 4.2 | 0.1 | 0.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 32.6 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 7 | 15 | 17 | 678 | 541 | 6 |
| Future Vol, veh/h | 7 | 15 | 17 | 678 | 541 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 54 | 54 | 86 | 86 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 13 | 28 | 20 | 788 | 660 | 7 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1492 | 664 | 667 | 0 | 0 |
| Stage 1 | 664 | - | - | - | - |
| Stage 2 | 828 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 137 | 464 | 932 | - | - |
| Stage 1 | 516 | - | - | - | - |
| Stage 2 | 432 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 132 | 464 | 932 | - | - |
| Mov Cap-2 Maneuver | 132 | - | - | - | - |
| Stage 1 | 496 | - | - | - | - |
| Stage 2 | 432 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.6 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 932 | - | 258 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.158 | - | - |
| HCM Control Delay (s) | 8.9 | 0 | 21.6 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.6 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↔ | | ↕ | | ↔ | |
| Traffic Vol, veh/h | 46 | 14 | 17 | 635 | 542 | 36 |
| Future Vol, veh/h | 46 | 14 | 17 | 635 | 542 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 56 | 56 | 89 | 89 | 84 | 84 |
| Heavy Vehicles, % | 3 | 3 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 82 | 25 | 19 | 713 | 645 | 43 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1418 | 667 | 688 | 0 | 0 |
| Stage 1 | 667 | - | - | - | - |
| Stage 2 | 751 | - | - | - | - |
| Critical Hdwy | 6.43 | 6.23 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.43 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.43 | - | - | - | - |
| Follow-up Hdwy | 3.527 | 3.327 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 150 | 457 | 916 | - | - |
| Stage 1 | 508 | - | - | - | - |
| Stage 2 | 464 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 145 | 457 | 916 | - | - |
| Mov Cap-2 Maneuver | 145 | - | - | - | - |
| Stage 1 | 491 | - | - | - | - |
| Stage 2 | 464 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 55.4 | 0.2 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 916 | - | 172 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.623 | - | - |
| HCM Control Delay (s) | 9 | 0 | 55.4 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.5 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Traffic Vol, veh/h | 630 | 48 | 6 | 545 | 43 | 9 |
| Future Vol, veh/h | 630 | 48 | 6 | 545 | 43 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 83 | 83 | 51 | 51 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 733 | 56 | 7 | 657 | 84 | 18 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 789 | 0 |
| Stage 1 | - | - | - | 761 |
| Stage 2 | - | - | - | 671 |
| Critical Hdwy | - | - | 4.1 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - |
| Pot Cap-1 Maneuver | - | - | 840 | - |
| Stage 1 | - | - | - | 465 |
| Stage 2 | - | - | - | 512 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 840 | - |
| Mov Cap-2 Maneuver | - | - | - | 147 |
| Stage 1 | - | - | - | 465 |
| Stage 2 | - | - | - | 505 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 56.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 165 | - | - | 840 | - |
| HCM Lane V/C Ratio | 0.618 | - | - | 0.009 | - |
| HCM Control Delay (s) | 56.9 | - | - | 9.3 | 0 |
| HCM Lane LOS | F | - | - | A | A |
| HCM 95th %tile Q(veh) | 3.4 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 21 | 71 | 12 | 829 | 612 | 12 |
| Future Vol, veh/h | 21 | 71 | 12 | 829 | 612 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 84 | 84 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 23 | 78 | 14 | 987 | 665 | 13 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1687 | 672 | 678 | 0 | 0 |
| Stage 1 | 672 | - | - | - | - |
| Stage 2 | 1015 | - | - | - | - |
| Critical Hdwy | 6.5 | 6.3 | 4.11 | - | - |
| Critical Hdwy Stg 1 | 5.5 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.5 | - | - | - | - |
| Follow-up Hdwy | 3.59 | 3.39 | 2.209 | - | - |
| Pot Cap-1 Maneuver | 99 | 442 | 919 | - | - |
| Stage 1 | 493 | - | - | - | - |
| Stage 2 | 338 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 96 | 442 | 919 | - | - |
| Mov Cap-2 Maneuver | 96 | - | - | - | - |
| Stage 1 | 476 | - | - | - | - |
| Stage 2 | 338 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 30.1 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 919 | - | 242 | - | - |
| HCM Lane V/C Ratio | 0.016 | - | 0.418 | - | - |
| HCM Control Delay (s) | 9 | 0 | 30.1 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.9 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

07/06/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 37 | 776 | 40 | 25 | 595 |
| Future Vol, veh/h | 17 | 37 | 776 | 40 | 25 | 595 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 71 | 71 | 88 | 88 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 6 | 6 | 6 | 6 |
| Mvmt Flow | 24 | 52 | 882 | 45 | 27 | 654 |

| Major/Minor | Minor1 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1590 | 882 | 0 | 0 | 927 |
| Stage 1 | 882 | - | - | - | - |
| Stage 2 | 708 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.16 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.254 |
| Pot Cap-1 Maneuver | 120 | 348 | - | - | 721 |
| Stage 1 | 408 | - | - | - | - |
| Stage 2 | 492 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 113 | 348 | - | - | 721 |
| Mov Cap-2 Maneuver | 113 | - | - | - | - |
| Stage 1 | 408 | - | - | - | - |
| Stage 2 | 463 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 26 | 0 | 0.4 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 113 | 348 | 721 | - |
| HCM Lane V/C Ratio | - | - | 0.212 | 0.15 | 0.038 | - |
| HCM Control Delay (s) | - | - | 45.2 | 17.2 | 10.2 | 0 |
| HCM Lane LOS | - | - | E | C | B | A |
| HCM 95th %tile Q(veh) | - | - | 0.8 | 0.5 | 0.1 | - |

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020

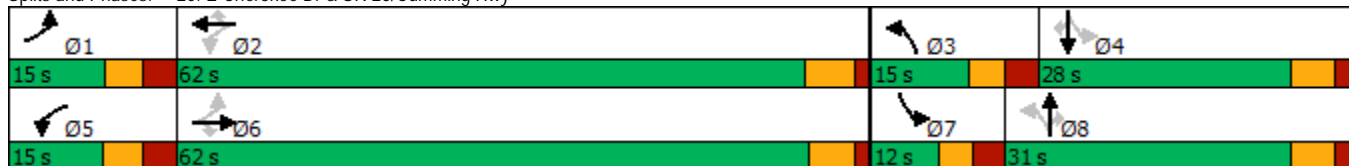


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Future Volume (vph) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 | 62.0 | 15.0 | 62.0 | 62.0 | 15.0 | 31.0 | 31.0 | 12.0 | 28.0 | 28.0 |
| Total Split (%) | 12.5% | 51.7% | 51.7% | 12.5% | 51.7% | 51.7% | 12.5% | 25.8% | 25.8% | 10.0% | 23.3% | 23.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 63.8 | 56.5 | 56.5 | 65.4 | 59.4 | 59.4 | 33.6 | 25.4 | 25.4 | 28.0 | 22.4 | 22.4 |
| Actuated g/C Ratio | 0.53 | 0.47 | 0.47 | 0.54 | 0.50 | 0.50 | 0.28 | 0.21 | 0.21 | 0.23 | 0.19 | 0.19 |
| v/c Ratio | 0.39 | 1.12 | 0.21 | 1.09 | 1.09 | 0.19 | 1.22 | 0.79 | 0.50 | 1.42 | 0.80 | 0.25 |
| Control Delay | 19.8 | 100.0 | 5.3 | 122.8 | 87.3 | 4.7 | 166.0 | 60.2 | 14.3 | 248.2 | 64.9 | 4.0 |
| 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 | 19.8 | 100.0 | 5.3 | 122.8 | 87.3 | 4.7 | 166.0 | 60.2 | 14.3 | 248.2 | 64.9 | 4.0 |
| LOS | B | F | A | F | F | A | F | E | B | F | E | A |
| Approach Delay | | 82.0 | | | 82.6 | | | 80.8 | | | 128.3 | |
| Approach LOS | | F | | | F | | | F | | | F | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Natural Cycle: 170 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.42 | |
| Intersection Signal Delay: 89.4 | Intersection LOS: F |
| Intersection Capacity Utilization 103.0% | ICU Level of Service G |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

07/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | | |
|------------------------------|------|------|-------|-------|------|-------|-------|-------|------|-------|------|------|-----|--|--|
| Lane Configurations | | | | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 | | | |
| Future Volume (veh/h) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Work Zone On Approach | No | | | No | | | No | | | No | | | | | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1811 | 1811 | 1811 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | | | |
| Adj Flow Rate, veh/h | 68 | 953 | 168 | 191 | 963 | 0 | 267 | 318 | 244 | 255 | 282 | 102 | | | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.85 | 0.85 | 0.85 | 0.83 | 0.83 | 0.83 | | | |
| Percent Heavy Veh, % | 5 | 5 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 1 | 1 | 1 | | | |
| Cap, veh/h | 163 | 857 | 726 | 180 | 871 | 0 | 236 | 401 | 340 | 194 | 351 | 297 | | | |
| Arrive On Green | 0.06 | 0.47 | 0.47 | 0.07 | 0.48 | 0.00 | 0.07 | 0.21 | 0.21 | 0.05 | 0.19 | 0.19 | | | |
| Sat Flow, veh/h | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | | | |
| Grp Volume(v), veh/h | 68 | 953 | 168 | 191 | 963 | 0 | 267 | 318 | 244 | 255 | 282 | 102 | | | |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1826 | 1547 | 1725 | 1811 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | | | |
| Q Serve(g_s), s | 2.3 | 56.5 | 7.8 | 8.4 | 57.9 | 0.0 | 8.8 | 19.1 | 17.0 | 6.0 | 17.2 | 6.7 | | | |
| Cycle Q Clear(g_c), s | 2.3 | 56.5 | 7.8 | 8.4 | 57.9 | 0.0 | 8.8 | 19.1 | 17.0 | 6.0 | 17.2 | 6.7 | | | |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 163 | 857 | 726 | 180 | 871 | | 236 | 401 | 340 | 194 | 351 | 297 | | | |
| V/C Ratio(X) | 0.42 | 1.11 | 0.23 | 1.06 | 1.11 | | 1.13 | 0.79 | 0.72 | 1.31 | 0.80 | 0.34 | | | |
| Avail Cap(c_a), veh/h | 184 | 857 | 726 | 180 | 871 | | 236 | 401 | 340 | 194 | 351 | 297 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 27.2 | 31.9 | 19.0 | 36.2 | 31.2 | 0.0 | 44.7 | 45.0 | 44.2 | 47.8 | 46.9 | 42.6 | | | |
| Incr Delay (d2), s/veh | 1.7 | 66.3 | 0.7 | 83.9 | 63.5 | 0.0 | 99.3 | 14.9 | 12.3 | 173.1 | 17.6 | 3.1 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 0.9 | 38.7 | 2.8 | 6.6 | 38.5 | 0.0 | 9.1 | 10.4 | 7.7 | 12.1 | 9.6 | 2.8 | | | |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.8 | 98.3 | 19.8 | 120.1 | 94.8 | 0.0 | 144.0 | 59.9 | 56.5 | 220.9 | 64.5 | 45.7 | | | |
| LnGrp LOS | C | F | B | F | F | | F | E | E | F | E | D | | | |
| Approach Vol, veh/h | 1189 | | | 1154 | | | A | | | 829 | | | 639 | | |
| Approach Delay, s/veh | 83.2 | | | 99.0 | | | 86.0 | | | 123.9 | | | | | |
| Approach LOS | F | | | F | | | F | | | F | | | | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | |
| Phs Duration (G+Y+Rc), s | 13.6 | 63.8 | 15.0 | 28.0 | 15.0 | 62.4 | 12.0 | 31.0 | | | | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | | | | |
| Max Green Setting (Gmax), s | 8.6 | 56.1 | * 8.8 | * 22 | 8.4 | * 57 | 6.0 | * 25 | | | | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 59.9 | 10.8 | 19.2 | 10.4 | 58.5 | 8.0 | 21.1 | | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 1.1 | | | | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 95.4 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 963 | 963 | 194 | 736 | 175 | 654 | 24 | 21 | 58 |
| Average Queue (ft) | 21 | 945 | 944 | 129 | 589 | 174 | 635 | 2 | 3 | 8 |
| 95th Queue (ft) | 132 | 950 | 951 | 220 | 841 | 176 | 641 | 14 | 15 | 30 |
| Link Distance (ft) | | 929 | 929 | | 719 | | 620 | | 144 | |
| Upstream Blk Time (%) | | 69 | 37 | | 8 | | 73 | | | |
| Queuing Penalty (veh) | | 0 | 0 | | 98 | | 0 | | | |
| Storage Bay Dist (ft) | 315 | | | 145 | | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 55 | | 8 | 35 | 69 | 2 | | | |
| Queuing Penalty (veh) | | 11 | | 84 | 57 | 153 | 12 | | | |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | WB | SB |
|-----------------------|-----|------|-----|
| Directions Served | LT | TR | LR |
| Maximum Queue (ft) | 699 | 945 | 71 |
| Average Queue (ft) | 155 | 232 | 24 |
| 95th Queue (ft) | 468 | 792 | 59 |
| Link Distance (ft) | 719 | 1487 | 352 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LT | LTR | LTR | LTR |
| Maximum Queue (ft) | 223 | 51 | 22 | 73 |
| Average Queue (ft) | 60 | 2 | 7 | 31 |
| 95th Queue (ft) | 147 | 17 | 23 | 66 |
| Link Distance (ft) | 1434 | 3846 | 517 | 824 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | 3 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | WB | SB |
|-----------------------|------|-----|-----|
| Directions Served | LT | TR | LR |
| Maximum Queue (ft) | 616 | 22 | 419 |
| Average Queue (ft) | 150 | 1 | 195 |
| 95th Queue (ft) | 390 | 8 | 408 |
| Link Distance (ft) | 3846 | 573 | 655 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 282 | 186 | 97 | 61 |
| Average Queue (ft) | 34 | 41 | 25 | 11 |
| 95th Queue (ft) | 133 | 134 | 63 | 35 |
| Link Distance (ft) | 573 | 1415 | 552 | 442 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 419 | 83 |
| Average Queue (ft) | 69 | 33 |
| 95th Queue (ft) | 218 | 67 |
| Link Distance (ft) | 2366 | 277 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 151 | 45 |
| Average Queue (ft) | 16 | 10 |
| 95th Queue (ft) | 76 | 31 |
| Link Distance (ft) | 2510 | 600 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 163 | 138 |
| Average Queue (ft) | 39 | 52 |
| 95th Queue (ft) | 122 | 93 |
| Link Distance (ft) | 2510 | 472 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 534 | 212 | 22 | 49 |
| Average Queue (ft) | 110 | 20 | 3 | 28 |
| 95th Queue (ft) | 339 | 114 | 15 | 54 |
| Link Distance (ft) | 4030 | 2936 | 637 | 210 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 967 | 350 | 716 | 400 | 224 | 585 | 420 | 170 | 754 | 525 |
| Average Queue (ft) | 384 | 922 | 327 | 690 | 171 | 105 | 256 | 137 | 103 | 385 | 206 |
| 95th Queue (ft) | 389 | 938 | 413 | 728 | 497 | 211 | 463 | 318 | 200 | 646 | 422 |
| Link Distance (ft) | | 904 | | 677 | | | 2412 | | | 1376 | |
| Upstream Blk Time (%) | | 80 | | 50 | | | | | | | |
| Queuing Penalty (veh) | | 0 | | 0 | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 350 | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 83 | 5 | 24 | 36 | | 0 | 30 | 0 | 4 | 54 | |
| Queuing Penalty (veh) | 525 | 17 | 236 | 187 | | 2 | 140 | 2 | 32 | 239 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LR | LT | TR |
| Maximum Queue (ft) | 306 | 216 | 74 |
| Average Queue (ft) | 137 | 65 | 9 |
| 95th Queue (ft) | 288 | 146 | 38 |
| Link Distance (ft) | 375 | 904 | 678 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 182 | 46 |
| Average Queue (ft) | 45 | 22 |
| 95th Queue (ft) | 126 | 44 |
| Link Distance (ft) | 610 | 765 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|------|------|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 648 | 93 | 28 | 72 |
| Average Queue (ft) | 434 | 19 | 1 | 6 |
| 95th Queue (ft) | 645 | 57 | 10 | 34 |
| Link Distance (ft) | 614 | 581 | 1624 | 3762 |
| Upstream Blk Time (%) | 5 | | | |
| Queuing Penalty (veh) | 0 | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | T | L | T |
| Maximum Queue (ft) | 224 | 422 | 225 | 31 | 476 | 234 | 336 | 132 | 181 |
| Average Queue (ft) | 73 | 191 | 8 | 13 | 197 | 132 | 149 | 55 | 80 |
| 95th Queue (ft) | 171 | 343 | 77 | 38 | 331 | 219 | 271 | 106 | 147 |
| Link Distance (ft) | | 3762 | | | 1100 | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 185 | | 190 | |
| Storage Blk Time (%) | | 9 | | | 9 | 5 | 3 | | 0 |
| Queuing Penalty (veh) | | 14 | | | 8 | 14 | 8 | | 0 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 52 | 90 |
| Average Queue (ft) | 20 | 13 |
| 95th Queue (ft) | 47 | 52 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 68 | 138 |
| Average Queue (ft) | 37 | 9 |
| 95th Queue (ft) | 63 | 54 |
| Link Distance (ft) | 614 | 288 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 74 | 107 |
| Average Queue (ft) | 4 | 31 |
| 95th Queue (ft) | 27 | 80 |
| Link Distance (ft) | 784 | 505 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 167 | 113 |
| Average Queue (ft) | 61 | 15 |
| 95th Queue (ft) | 118 | 67 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | SB |
|-----------------------|-----|------|
| Directions Served | L | LT |
| Maximum Queue (ft) | 42 | 96 |
| Average Queue (ft) | 10 | 18 |
| 95th Queue (ft) | 28 | 63 |
| Link Distance (ft) | 484 | 1053 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 230 | 776 | 310 | 259 | 1363 | 220 | 280 | 598 | 278 | 270 | 823 | 100 |
| Average Queue (ft) | 77 | 735 | 211 | 181 | 1336 | 110 | 195 | 223 | 114 | 264 | 798 | 60 |
| 95th Queue (ft) | 198 | 758 | 427 | 322 | 1363 | 291 | 322 | 412 | 205 | 294 | 842 | 129 |
| Link Distance (ft) | | 713 | | | 1300 | | | 607 | | | 788 | |
| Upstream Blk Time (%) | | 51 | | | 50 | | | 0 | | | 72 | |
| Queuing Penalty (veh) | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Bay Dist (ft) | 165 | | 225 | 210 | | 170 | 230 | | 550 | 220 | | 50 |
| Storage Blk Time (%) | | 49 | | 3 | 40 | | 20 | 5 | | 75 | 70 | 10 |
| Queuing Penalty (veh) | | 110 | | 27 | 126 | | 97 | 22 | | 240 | 207 | 45 |

Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 2715 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020

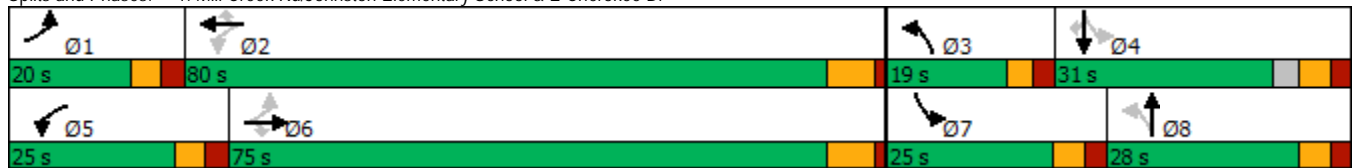


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 20.0 | 75.0 | 75.0 | 25.0 | 80.0 | 80.0 | 19.0 | 28.0 | 25.0 | 31.0 | 31.0 |
| Total Split (%) | 13.1% | 49.0% | 49.0% | 16.3% | 52.3% | 52.3% | 12.4% | 18.3% | 16.3% | 20.3% | 20.3% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 43.6 | 33.2 | 33.2 | 57.1 | 40.5 | 40.5 | 33.9 | 22.0 | 47.1 | 30.4 | 30.4 |
| Actuated g/C Ratio | 0.37 | 0.28 | 0.28 | 0.49 | 0.35 | 0.35 | 0.29 | 0.19 | 0.40 | 0.26 | 0.26 |
| v/c Ratio | 0.52 | 0.45 | 0.71 | 0.65 | 0.79 | 0.17 | 0.35 | 0.45 | 0.23 | 0.31 | 0.34 |
| Control Delay | 25.5 | 35.5 | 9.1 | 24.8 | 39.3 | 4.9 | 26.2 | 42.7 | 26.2 | 40.4 | 7.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.5 | 35.5 | 9.1 | 24.8 | 39.3 | 4.9 | 26.2 | 42.7 | 26.2 | 40.4 | 7.8 |
| LOS | C | D | A | C | D | A | C | D | C | D | A |
| Approach Delay | | 21.1 | | | 33.5 | | | 32.1 | | 23.4 | |
| Approach LOS | | C | | | C | | | C | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 153 | |
| Actuated Cycle Length: 116.8 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.79 | |
| Intersection Signal Delay: 27.8 | Intersection LOS: C |
| Intersection Capacity Utilization 70.9% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 288 | 1440 | 642 | 428 | 1666 | 743 | 679 | 290 | | 439 | 395 | 335 |
| Arrive On Green | 0.05 | 0.41 | 0.41 | 0.11 | 0.47 | 0.47 | 0.08 | 0.16 | 0.00 | 0.14 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 3401 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1700 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 5.3 | 12.1 | 49.4 | 13.4 | 27.5 | 5.1 | 9.1 | 5.6 | 0.0 | 6.5 | 9.6 | 14.5 |
| Cycle Q Clear(g_c), s | 5.3 | 12.1 | 49.4 | 13.4 | 27.5 | 5.1 | 9.1 | 5.6 | 0.0 | 6.5 | 9.6 | 14.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 288 | 1440 | 642 | 428 | 1666 | 743 | 679 | 290 | | 439 | 395 | 335 |
| V/C Ratio(X) | 0.41 | 0.31 | 0.92 | 0.72 | 0.58 | 0.14 | 0.40 | 0.29 | | 0.25 | 0.37 | 0.54 |
| Avail Cap(c_a), veh/h | 370 | 1735 | 774 | 468 | 1878 | 838 | 731 | 290 | | 439 | 395 | 335 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.2 | 27.8 | 38.8 | 19.6 | 26.8 | 20.9 | 43.5 | 51.4 | 0.0 | 35.6 | 46.2 | 48.1 |
| Incr Delay (d2), s/veh | 0.9 | 0.1 | 14.7 | 4.8 | 0.4 | 0.1 | 0.4 | 2.5 | 0.0 | 1.4 | 2.7 | 6.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.3 | 5.2 | 21.2 | 6.1 | 11.7 | 1.9 | 3.9 | 2.8 | 0.0 | 3.0 | 4.7 | 6.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 24.1 | 27.9 | 53.5 | 24.5 | 27.2 | 20.9 | 43.9 | 53.9 | 0.0 | 37.0 | 48.9 | 54.4 |
| LnGrp LOS | C | C | D | C | C | C | D | D | | D | D | D |
| Approach Vol, veh/h | | 1163 | | | 1377 | | | 356 | A | | 440 | |
| Approach Delay, s/veh | | 40.5 | | | 26.1 | | | 46.2 | | | 48.2 | |
| Approach LOS | | D | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.6 | 71.8 | 16.9 | 36.1 | 21.9 | 63.4 | 25.0 | 28.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 14 | 73.1 | 13.5 | * 25 | * 19 | 68.1 | * 19 | * 22 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.3 | 29.5 | 11.1 | 16.5 | 15.4 | 51.4 | 8.5 | 7.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 9.3 | 0.2 | 0.9 | 0.3 | 5.1 | 0.2 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 36.2 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 602 | 1115 | 4 | 6 | 37 |
| Future Vol, veh/h | 11 | 602 | 1115 | 4 | 6 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 82 | 82 | 83 | 83 |
| Heavy Vehicles, % | 5 | 5 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 12 | 647 | 1360 | 5 | 7 | 45 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1365 | 0 | - | 0 | 2034 | 1363 |
| Stage 1 | - | - | - | - | 1363 | - |
| Stage 2 | - | - | - | - | 671 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | 494 | - | - | - | 61 | 176 |
| Stage 1 | - | - | - | - | 232 | - |
| Stage 2 | - | - | - | - | 499 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 494 | - | - | - | 60 | 176 |
| Mov Cap-2 Maneuver | - | - | - | - | 60 | - |
| Stage 1 | - | - | - | - | 226 | - |
| Stage 2 | - | - | - | - | 499 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 45.5 | | |
| HCM LOS | | | E | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 494 | - | - | - | 139 | |
| HCM Lane V/C Ratio | 0.024 | - | - | - | 0.373 | |
| HCM Control Delay (s) | 12.5 | - | - | - | 45.5 | |
| HCM Lane LOS | B | - | - | - | E | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.6 | |

HCM 6th TWSC

3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 19 | 552 | 6 | 1 | 745 | 14 | 13 | 0 | 11 | 38 | 1 | 67 |
| Future Vol, veh/h | 19 | 552 | 6 | 1 | 745 | 14 | 13 | 0 | 11 | 38 | 1 | 67 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 75 | 235 | - | 175 | - | - | - | - | - | 75 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 91 | 91 | 91 | 75 | 75 | 75 | 74 | 74 | 74 |
| Heavy Vehicles, % | 6 | 6 | 6 | 2 | 2 | 2 | 8 | 8 | 8 | 1 | 1 | 1 |
| Mvmt Flow | 20 | 575 | 6 | 1 | 819 | 15 | 17 | 0 | 15 | 51 | 1 | 91 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 834 | 0 | 0 | 581 | 0 | 0 | 1490 | 1451 | 575 | 1447 | 1442 | 819 |
| Stage 1 | - | - | - | - | - | - | 615 | 615 | - | 821 | 821 | - |
| Stage 2 | - | - | - | - | - | - | 875 | 836 | - | 626 | 621 | - |
| Critical Hdwy | 4.16 | - | - | 4.12 | - | - | 7.18 | 6.58 | 6.28 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.254 | - | - | 2.218 | - | - | 3.572 | 4.072 | 3.372 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 782 | - | - | 993 | - | - | 99 | 127 | 506 | 110 | 133 | 377 |
| Stage 1 | - | - | - | - | - | - | 468 | 473 | - | 370 | 390 | - |
| Stage 2 | - | - | - | - | - | - | 336 | 374 | - | 474 | 481 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 782 | - | - | 993 | - | - | 73 | 124 | 506 | 105 | 129 | 377 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 73 | 124 | - | 105 | 129 | - |
| Stage 1 | - | - | - | - | - | - | 456 | 461 | - | 360 | 390 | - |
| Stage 2 | - | - | - | - | - | - | 254 | 374 | - | 448 | 468 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.3 | 0 | 45.6 | 36.3 |
| HCM LOS | | | E | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 120 | 782 | - | - | 993 | - | - | 106 | 377 |
| HCM Lane V/C Ratio | 0.267 | 0.025 | - | - | 0.001 | - | - | 0.497 | 0.24 |
| HCM Control Delay (s) | 45.6 | 9.7 | - | - | 8.6 | - | - | 68.7 | 17.5 |
| HCM Lane LOS | E | A | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 1 | 0.1 | - | - | 0 | - | - | 2.2 | 0.9 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 39 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 22 | 573 | 685 | 45 | 188 | 56 |
| Future Vol, veh/h | 22 | 573 | 685 | 45 | 188 | 56 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 175 | 0 | 135 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 90 | 90 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 23 | 610 | 761 | 50 | 216 | 64 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 811 | 0 | - | 0 | 1417 761 |
| Stage 1 | - | - | - | - | 761 - |
| Stage 2 | - | - | - | - | 656 - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 802 | - | - | - | ~ 150 404 |
| Stage 1 | - | - | - | - | 459 - |
| Stage 2 | - | - | - | - | 514 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 802 | - | - | - | ~ 146 404 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 146 - |
| Stage 1 | - | - | - | - | 446 - |
| Stage 2 | - | - | - | - | 514 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 0.4 | 0 | 238.8 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|----------|-------|
| Capacity (veh/h) | 802 | - | - | - | 146 | 404 |
| HCM Lane V/C Ratio | 0.029 | - | - | - | 1.48 | 0.159 |
| HCM Control Delay (s) | 9.6 | - | - | - | \$ 305.3 | 15.6 |
| HCM Lane LOS | A | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 14.4 | 0.6 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 2 | 749 | 10 | 6 | 691 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Future Vol, veh/h | 2 | 749 | 10 | 6 | 691 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 175 | 175 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 89 | 89 | 89 | 73 | 73 | 73 | 58 | 58 | 58 |
| Heavy Vehicles, % | 4 | 4 | 4 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 2 | 797 | 11 | 7 | 776 | 6 | 25 | 0 | 32 | 9 | 0 | 28 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 782 | 0 | 0 | 808 | 0 | 0 | 1608 | 1597 | 797 | 1616 | 779 | |
| Stage 1 | - | - | - | - | - | - | 801 | 801 | - | 793 | 793 | - |
| Stage 2 | - | - | - | - | - | - | 807 | 796 | - | 823 | 812 | - |
| Critical Hdwy | 4.14 | - | - | 4.11 | - | - | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.209 | - | - | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 |
| Pot Cap-1 Maneuver | 827 | - | - | 822 | - | - | 83 | 105 | 382 | 82 | 104 | 391 |
| Stage 1 | - | - | - | - | - | - | 374 | 393 | - | 378 | 396 | - |
| Stage 2 | - | - | - | - | - | - | 371 | 395 | - | 363 | 388 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 827 | - | - | 822 | - | - | 77 | 104 | 382 | 75 | 103 | 391 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 77 | 104 | - | 75 | 103 | - |
| Stage 1 | - | - | - | - | - | - | 373 | 392 | - | 377 | 392 | - |
| Stage 2 | - | - | - | - | - | - | 342 | 391 | - | 332 | 387 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 0.1 | 47.4 | 27.6 |
| HCM LOS | | | E | D |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 139 | 827 | - | - | 822 | - | - | 195 |
| HCM Lane V/C Ratio | 0.404 | 0.003 | - | - | 0.008 | - | - | 0.186 |
| HCM Control Delay (s) | 47.4 | 9.4 | - | - | 9.4 | - | - | 27.6 |
| HCM Lane LOS | E | A | - | - | A | - | - | D |
| HCM 95th %tile Q(veh) | 1.7 | 0 | - | - | 0 | - | - | 0.7 |

HCM 6th TWSC
6: E Cherokee Dr & Avery Creek Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 641 | 728 | 16 | 56 | 44 |
| Future Vol, veh/h | 13 | 641 | 728 | 16 | 56 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 150 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 89 | 87 | 68 | 68 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 697 | 818 | 18 | 82 | 65 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 836 | 0 | - | 0 | 1543 818 |
| Stage 1 | - | - | - | - | 818 - |
| Stage 2 | - | - | - | - | 725 - |
| Critical Hdwy | 4.14 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.236 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 789 | - | - | - | 126 376 |
| Stage 1 | - | - | - | - | 434 - |
| Stage 2 | - | - | - | - | 479 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 789 | - | - | - | 124 376 |
| Mov Cap-2 Maneuver | - | - | - | - | 124 - |
| Stage 1 | - | - | - | - | 426 - |
| Stage 2 | - | - | - | - | 479 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 51.2 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 789 | - | - | - | 124 | 376 |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.664 | 0.172 |
| HCM Control Delay (s) | 9.6 | - | - | - | 78.4 | 16.6 |
| HCM Lane LOS | A | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 3.5 | 0.6 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 698 | 9 | 2 | 722 | 19 | 9 |
| Future Vol, veh/h | 698 | 9 | 2 | 722 | 19 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 83 | 83 | 64 | 64 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 767 | 10 | 2 | 870 | 30 | 14 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 777 | 0 | 1641 | 767 |
| Stage 1 | - | - | - | - | 767 | - |
| Stage 2 | - | - | - | - | 874 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | - | - | 839 | - | 107 | 394 |
| Stage 1 | - | - | - | - | 450 | - |
| Stage 2 | - | - | - | - | 400 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 839 | - | 106 | 394 |
| Mov Cap-2 Maneuver | - | - | - | - | 106 | - |
| Stage 1 | - | - | - | - | 450 | - |
| Stage 2 | - | - | - | - | 398 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0 | 42.4 | | | |
| HCM LOS | E | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 139 | - | - | 839 | - | |
| HCM Lane V/C Ratio | 0.315 | - | - | 0.003 | - | |
| HCM Control Delay (s) | 42.4 | - | - | 9.3 | 0 | |
| HCM Lane LOS | E | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1.2 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 14 | 687 | 661 | 9 | 45 | 54 |
| Future Vol, veh/h | 14 | 687 | 661 | 9 | 45 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 180 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 91 | 91 | 81 | 81 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 15 | 747 | 726 | 10 | 56 | 67 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 736 | 0 | 0 | 1503 | 726 |
| Stage 1 | - | - | - | 726 | - |
| Stage 2 | - | - | - | 777 | - |
| Critical Hdwy | 4.15 | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 856 | - | - | 133 | 423 |
| Stage 1 | - | - | - | 477 | - |
| Stage 2 | - | - | - | 452 | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 856 | - | - | 131 | 423 |
| Mov Cap-2 Maneuver | - | - | - | 131 | - |
| Stage 1 | - | - | - | 468 | - |
| Stage 2 | - | - | - | 452 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 31.6 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 856 | - | - | - | 131 | 423 |
| HCM Lane V/C Ratio | 0.018 | - | - | - | 0.424 | 0.158 |
| HCM Control Delay (s) | 9.3 | - | - | - | 51.3 | 15.1 |
| HCM Lane LOS | A | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.8 | 0.6 |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 36 | 781 | 4 | 5 | 648 | 9 | 3 | 0 | 6 | 5 | 0 | 108 |
| Future Vol, veh/h | 36 | 781 | 4 | 5 | 648 | 9 | 3 | 0 | 6 | 5 | 0 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | - | 235 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 95 | 95 | 95 | 44 | 44 | 44 | 73 | 73 | 73 |
| Heavy Vehicles, % | 4 | 4 | 4 | 2 | 2 | 2 | 14 | 14 | 14 | 1 | 1 | 1 |
| Mvmt Flow | 42 | 908 | 5 | 5 | 682 | 9 | 7 | 0 | 14 | 7 | 0 | 148 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 691 | 0 | 0 | 913 | 0 | 0 | 1766 | 1696 | 911 | 1699 | 1694 | 687 |
| Stage 1 | - | - | - | - | - | - | 995 | 995 | - | 697 | 697 | - |
| Stage 2 | - | - | - | - | - | - | 771 | 701 | - | 1002 | 997 | - |
| Critical Hdwy | 4.14 | - | - | 4.12 | - | - | 7.24 | 6.64 | 6.34 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.218 | - | - | 3.626 | 4.126 | 3.426 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 895 | - | - | 746 | - | - | 61 | 87 | 316 | 73 | 93 | 449 |
| Stage 1 | - | - | - | - | - | - | 280 | 308 | - | 433 | 444 | - |
| Stage 2 | - | - | - | - | - | - | 375 | 423 | - | 293 | 323 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 895 | - | - | 746 | - | - | 39 | 82 | 316 | 67 | 88 | 449 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 39 | 82 | - | 67 | 88 | - |
| Stage 1 | - | - | - | - | - | - | 267 | 294 | - | 413 | 441 | - |
| Stage 2 | - | - | - | - | - | - | 250 | 420 | - | 267 | 308 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.4 | 0.1 | 53.6 | 22.4 |
| HCM LOS | | | F | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 94 | 895 | - | - | 746 | - | - | 359 |
| HCM Lane V/C Ratio | 0.218 | 0.047 | - | - | 0.007 | - | - | 0.431 |
| HCM Control Delay (s) | 53.6 | 9.2 | - | - | 9.9 | - | - | 22.4 |
| HCM Lane LOS | F | A | - | - | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.8 | 0.1 | - | - | 0 | - | - | 2.1 |

Timings

10: E Cherokee Dr & Hickory Rd

08/17/2020



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 329 | 639 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Future Volume (vph) | 329 | 639 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 25.0 | 62.0 | 23.0 | 60.0 | 60.0 | 25.0 | 50.0 | 50.0 | 25.0 | 50.0 | 50.0 |
| Total Split (%) | 15.6% | 38.8% | 14.4% | 37.5% | 37.5% | 15.6% | 31.3% | 31.3% | 15.6% | 31.3% | 31.3% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 75.9 | 56.9 | 70.2 | 54.0 | 54.0 | 59.0 | 44.0 | 44.0 | 58.9 | 44.0 | 44.0 |
| Actuated g/C Ratio | 0.49 | 0.36 | 0.45 | 0.35 | 0.35 | 0.38 | 0.28 | 0.28 | 0.38 | 0.28 | 0.28 |
| v/c Ratio | 0.88 | 1.14 | 0.88 | 0.61 | 0.23 | 0.74 | 0.67 | 0.44 | 0.53 | 0.93 | 0.54 |
| Control Delay | 49.4 | 123.3 | 78.7 | 47.8 | 6.2 | 57.9 | 57.3 | 10.4 | 35.7 | 80.2 | 6.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.4 | 123.3 | 78.7 | 47.8 | 6.2 | 57.9 | 57.3 | 10.4 | 35.7 | 80.2 | 6.8 |
| LOS | D | F | E | D | A | E | E | B | D | F | A |
| Approach Delay | | 99.2 | | 48.1 | | | 41.2 | | | 45.5 | |
| Approach LOS | | F | | D | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 156 | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.14 | |
| Intersection Signal Delay: 61.7 | Intersection LOS: E |
| Intersection Capacity Utilization 96.0% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd

| | | | |
|------------|------------|------------|------------|
| Ø1 25 s | Ø2 60 s | Ø3 25 s | Ø4 50 s |
| Ø5 23 s | Ø6 62 s | Ø7 25 s | Ø8 50 s |

HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 329 | 639 | 42 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Future Volume (veh/h) | 329 | 639 | 42 | 168 | 325 | 120 | 146 | 317 | 246 | 148 | 426 | 343 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 374 | 726 | 0 | 198 | 382 | 0 | 160 | 348 | 270 | 172 | 495 | 399 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.91 | 0.91 | 0.91 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 3 | 1 | 1 | 1 |
| Cap, veh/h | 454 | 713 | | 219 | 645 | | 206 | 527 | 446 | 290 | 542 | 460 |
| Arrive On Green | 0.12 | 0.38 | 0.00 | 0.10 | 0.35 | 0.00 | 0.08 | 0.28 | 0.28 | 0.08 | 0.29 | 0.29 |
| Sat Flow, veh/h | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 374 | 726 | 0 | 198 | 382 | 0 | 160 | 348 | 270 | 172 | 495 | 399 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 0 | 1739 | 1826 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 19.0 | 57.9 | 0.0 | 13.0 | 26.2 | 0.0 | 9.7 | 25.3 | 22.7 | 10.3 | 38.8 | 36.3 |
| Cycle Q Clear(g_c), s | 19.0 | 57.9 | 0.0 | 13.0 | 26.2 | 0.0 | 9.7 | 25.3 | 22.7 | 10.3 | 38.8 | 36.3 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 454 | 713 | | 219 | 645 | | 206 | 527 | 446 | 290 | 542 | 460 |
| V/C Ratio(X) | 0.82 | 1.02 | | 0.90 | 0.59 | | 0.78 | 0.66 | 0.60 | 0.59 | 0.91 | 0.87 |
| Avail Cap(c_a), veh/h | 454 | 713 | | 240 | 645 | | 288 | 534 | 452 | 366 | 542 | 460 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.1 | 47.5 | 0.0 | 46.5 | 40.5 | 0.0 | 40.1 | 48.3 | 47.3 | 36.7 | 52.6 | 51.7 |
| Incr Delay (d2), s/veh | 11.7 | 38.2 | 0.0 | 32.0 | 4.0 | 0.0 | 8.5 | 4.1 | 3.4 | 1.9 | 22.2 | 19.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 10.6 | 34.6 | 0.0 | 6.5 | 12.6 | 0.0 | 4.7 | 12.4 | 9.4 | 4.7 | 21.7 | 17.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 43.8 | 85.8 | 0.0 | 78.5 | 44.4 | 0.0 | 48.6 | 52.3 | 50.8 | 38.6 | 74.8 | 71.1 |
| LnGrp LOS | D | F | | E | D | | D | D | D | D | E | E |
| Approach Vol, veh/h | | 1100 | A | | 580 | A | | 778 | | | 1066 | |
| Approach Delay, s/veh | | 71.5 | | | 56.1 | | | 51.0 | | | 67.6 | |
| Approach LOS | | E | | | E | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 25.0 | 60.0 | 17.9 | 50.0 | 21.1 | 63.9 | 18.5 | 49.4 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 19.0 | 54.0 | 19.0 | 44.0 | 17.0 | 56.0 | 19.0 | 44.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 21.0 | 28.2 | 11.7 | 40.8 | 15.0 | 59.9 | 12.3 | 27.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.7 | 0.2 | 2.1 | 0.1 | 0.0 | 0.2 | 5.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 63.2 |
| HCM 6th LOS | E |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
 11: E Cherokee Dr & Bart Manous Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 4.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 131 | 111 | 29 | 204 | 476 | 81 |
| Future Vol, veh/h | 131 | 111 | 29 | 204 | 476 | 81 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 100 | 160 | - | - | 100 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 71 | 71 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 8 | 8 |
| Mvmt Flow | 144 | 122 | 41 | 287 | 523 | 89 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 892 | 523 | 612 | 0 | 0 |
| Stage 1 | 523 | - | - | - | - |
| Stage 2 | 369 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.19 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.281 | - | - |
| Pot Cap-1 Maneuver | 314 | 556 | 934 | - | - |
| Stage 1 | 597 | - | - | - | - |
| Stage 2 | 702 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 300 | 556 | 934 | - | - |
| Mov Cap-2 Maneuver | 300 | - | - | - | - |
| Stage 1 | 571 | - | - | - | - |
| Stage 2 | 702 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 21 | 1.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 934 | - | 300 | 556 | - | - |
| HCM Lane V/C Ratio | 0.044 | - | 0.48 | 0.219 | - | - |
| HCM Control Delay (s) | 9 | - | 27.6 | 13.3 | - | - |
| HCM Lane LOS | A | - | D | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 2.5 | 0.8 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 312 | 527 | 0 | 1 | 49 |
| Future Vol, veh/h | 13 | 312 | 527 | 0 | 1 | 49 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 94 | 94 | 75 | 75 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 15 | 371 | 561 | 0 | 1 | 65 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 561 | 0 | - | 0 | 962 561 |
| Stage 1 | - | - | - | - | 561 - |
| Stage 2 | - | - | - | - | 401 - |
| Critical Hdwy | 4.12 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 1010 | - | - | - | 283 525 |
| Stage 1 | - | - | - | - | 569 - |
| Stage 2 | - | - | - | - | 674 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1010 | - | - | - | 279 525 |
| Mov Cap-2 Maneuver | - | - | - | - | 279 - |
| Stage 1 | - | - | - | - | 560 - |
| Stage 2 | - | - | - | - | 674 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.3 | 0 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1010 | - | - | - | 516 |
| HCM Lane V/C Ratio | 0.015 | - | - | - | 0.129 |
| HCM Control Delay (s) | 8.6 | - | - | - | 13 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.4 |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 14.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | ↕ |
| Traffic Vol, veh/h | 196 | 0 | 0 | 0 | 0 | 4 | 0 | 320 | 5 | 1 | 516 | 140 |
| Future Vol, veh/h | 196 | 0 | 0 | 0 | 0 | 4 | 0 | 320 | 5 | 1 | 516 | 140 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 175 | - | - | - | - | - | - | - | - | 175 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 75 | 75 | 75 | 77 | 77 | 77 | 95 | 95 | 95 |
| Heavy Vehicles, % | 4 | 4 | 4 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 |
| Mvmt Flow | 215 | 0 | 0 | 0 | 0 | 5 | 0 | 416 | 6 | 1 | 543 | 147 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 967 | 967 | 543 | 1038 | 1111 | 419 | 690 | 0 | 0 | 422 | 0 | 0 |
| Stage 1 | 545 | 545 | - | 419 | 419 | - | - | - | - | - | - | - |
| Stage 2 | 422 | 422 | - | 619 | 692 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.14 | 6.54 | 6.24 | 7.1 | 6.5 | 6.2 | 4.13 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.036 | 3.336 | 3.5 | 4 | 3.3 | 2.227 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 232 | 252 | 536 | 211 | 211 | 638 | 900 | - | - | 1137 | - | - |
| Stage 1 | 519 | 515 | - | 616 | 593 | - | - | - | - | - | - | - |
| Stage 2 | 605 | 585 | - | 480 | 448 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 230 | 252 | 536 | 211 | 211 | 638 | 900 | - | - | 1137 | - | - |
| Mov Cap-2 Maneuver | 230 | 252 | - | 211 | 211 | - | - | - | - | - | - | - |
| Stage 1 | 519 | 514 | - | 616 | 593 | - | - | - | - | - | - | - |
| Stage 2 | 600 | 585 | - | 480 | 448 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 88.8 | | | 10.7 | | | 0 | | | 0 | | |
| HCM LOS | F | | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 900 | - | - | 230 | - | 638 | 1137 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.936 | - | 0.008 | 0.001 | - | - |
| HCM Control Delay (s) | 0 | - | - | 88.8 | 0 | 10.7 | 8.2 | 0 | - |
| HCM Lane LOS | A | - | - | F | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 8.1 | - | 0 | 0 | - | - |

Timings

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Future Volume (vph) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 57.0 | 57.0 | 20.0 | 57.0 | 57.0 | 23.0 | 30.0 | 30.0 | 23.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 43.8% | 43.8% | 15.4% | 43.8% | 43.8% | 17.7% | 23.1% | 23.1% | 17.7% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effct Green (s) | 58.7 | 51.2 | 51.2 | 65.4 | 56.6 | 56.6 | 22.7 | 14.0 | 14.0 | 36.6 | 24.7 | 24.7 |
| Actuated g/C Ratio | 0.50 | 0.44 | 0.44 | 0.56 | 0.49 | 0.49 | 0.19 | 0.12 | 0.12 | 0.31 | 0.21 | 0.21 |
| v/c Ratio | 0.21 | 0.55 | 0.16 | 0.33 | 0.67 | 0.26 | 0.26 | 0.61 | 0.50 | 0.78 | 0.64 | 0.26 |
| Control Delay | 13.5 | 28.6 | 4.0 | 14.1 | 29.6 | 7.9 | 31.8 | 60.9 | 12.2 | 49.6 | 52.6 | 6.8 |
| 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 | 13.5 | 28.6 | 4.0 | 14.1 | 29.6 | 7.9 | 31.8 | 60.9 | 12.2 | 49.6 | 52.6 | 6.8 |
| LOS | B | C | A | B | C | A | C | E | B | D | D | A |
| Approach Delay | | 22.3 | | | 22.3 | | | 33.7 | | | 43.3 | |
| Approach LOS | | C | | | C | | | C | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 116.5 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 29.0 | Intersection LOS: C |
| Intersection Capacity Utilization 67.2% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr

| | | | |
|------|------|------|------|
| Ø1 | Ø2 | Ø3 | Ø4 |
| 20 s | 57 s | 23 s | 30 s |
| Ø5 | Ø6 | Ø7 | Ø8 |
| 20 s | 57 s | 23 s | 30 s |

HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Future Volume (veh/h) | 60 | 389 | 106 | 119 | 484 | 178 | 47 | 91 | 111 | 211 | 178 | 82 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 | 1885 | 1885 | 1885 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h | 68 | 442 | 0 | 145 | 590 | 0 | 71 | 138 | 0 | 281 | 237 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.82 | 0.82 | 0.82 | 0.66 | 0.66 | 0.66 | 0.75 | 0.75 | 0.75 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 1 | 8 | 8 | 8 |
| Cap, veh/h | 333 | 861 | | 451 | 905 | | 244 | 178 | | 358 | 360 | |
| Arrive On Green | 0.03 | 0.47 | 0.00 | 0.06 | 0.50 | 0.00 | 0.05 | 0.09 | 0.00 | 0.16 | 0.20 | 0.00 |
| Sat Flow, veh/h | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Grp Volume(v), veh/h | 68 | 442 | 0 | 145 | 590 | 0 | 71 | 138 | 0 | 281 | 237 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Q Serve(g_s), s | 2.2 | 18.3 | 0.0 | 4.7 | 26.3 | 0.0 | 3.9 | 7.8 | 0.0 | 15.8 | 13.4 | 0.0 |
| Cycle Q Clear(g_c), s | 2.2 | 18.3 | 0.0 | 4.7 | 26.3 | 0.0 | 3.9 | 7.8 | 0.0 | 15.8 | 13.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 333 | 861 | | 451 | 905 | | 244 | 178 | | 358 | 360 | |
| V/C Ratio(X) | 0.20 | 0.51 | | 0.32 | 0.65 | | 0.29 | 0.78 | | 0.79 | 0.66 | |
| Avail Cap(c_a), veh/h | 498 | 861 | | 566 | 905 | | 438 | 415 | | 358 | 392 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 16.8 | 20.3 | 0.0 | 15.0 | 20.5 | 0.0 | 41.8 | 48.3 | 0.0 | 35.5 | 40.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.3 | 2.2 | 0.0 | 0.4 | 3.6 | 0.0 | 0.7 | 7.1 | 0.0 | 11.0 | 3.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.8 | 7.8 | 0.0 | 1.7 | 11.1 | 0.0 | 1.7 | 3.9 | 0.0 | 7.3 | 6.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 17.1 | 22.5 | 0.0 | 15.4 | 24.1 | 0.0 | 42.4 | 55.4 | 0.0 | 46.6 | 43.6 | 0.0 |
| LnGrp LOS | B | C | | B | C | | D | E | | D | D | |
| Approach Vol, veh/h | | 510 | A | | 735 | A | | 209 | A | | 518 | A |
| Approach Delay, s/veh | | 21.8 | | | 22.4 | | | 51.0 | | | 45.2 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.7 | 60.0 | 11.2 | 28.0 | 12.8 | 57.0 | 23.0 | 16.3 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 51.0 | 17.0 | 24.0 | 14.0 | 51.0 | 17.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.2 | 28.3 | 5.9 | 15.4 | 6.7 | 20.3 | 17.8 | 9.8 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.6 | 0.1 | 0.7 | 0.2 | 2.6 | 0.0 | 0.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 31.3 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 8 | 15 | 9 | 557 | 544 | 1 |
| Future Vol, veh/h | 8 | 15 | 9 | 557 | 544 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 50 | 50 | 77 | 77 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 16 | 30 | 12 | 723 | 640 | 1 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1388 | 641 | 641 | 0 | 0 |
| Stage 1 | 641 | - | - | - | - |
| Stage 2 | 747 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 159 | 478 | 934 | - | - |
| Stage 1 | 528 | - | - | - | - |
| Stage 2 | 472 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 156 | 478 | 934 | - | - |
| Mov Cap-2 Maneuver | 156 | - | - | - | - |
| Stage 1 | 517 | - | - | - | - |
| Stage 2 | 472 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.5 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 934 | - | 278 | - | - |
| HCM Lane V/C Ratio | 0.013 | - | 0.165 | - | - |
| HCM Control Delay (s) | 8.9 | 0 | 20.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.6 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | WT | | WT | WT | WT | WT |
| Traffic Vol, veh/h | 47 | 5 | 9 | 576 | 512 | 38 |
| Future Vol, veh/h | 47 | 5 | 9 | 576 | 512 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | 175 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 73 | 73 | 80 | 80 | 87 | 87 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 64 | 7 | 11 | 720 | 589 | 44 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1331 | 589 | 633 | 0 | 0 |
| Stage 1 | 589 | - | - | - | - |
| Stage 2 | 742 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 170 | 508 | 940 | - | - |
| Stage 1 | 554 | - | - | - | - |
| Stage 2 | 471 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 168 | 508 | 940 | - | - |
| Mov Cap-2 Maneuver | 168 | - | - | - | - |
| Stage 1 | 547 | - | - | - | - |
| Stage 2 | 471 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 37.5 | 0.1 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 940 | - | 180 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.396 | - | - |
| HCM Control Delay (s) | 8.9 | - | 37.5 | - | - |
| HCM Lane LOS | A | - | E | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.7 | - | - |

HCM 6th TWSC
 17: Haley Farm Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 603 | 22 | 4 | 525 | 20 | 3 |
| Future Vol, veh/h | 603 | 22 | 4 | 525 | 20 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 84 | 84 | 86 | 86 | 64 | 64 |
| Heavy Vehicles, % | 3 | 3 | 6 | 6 | 0 | 0 |
| Mvmt Flow | 718 | 26 | 5 | 610 | 31 | 5 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 744 | 0 |
| Stage 1 | - | - | - | 718 |
| Stage 2 | - | - | - | 620 |
| Critical Hdwy | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | - | - | 846 | - |
| Stage 1 | - | - | - | 487 |
| Stage 2 | - | - | - | 540 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 846 | - |
| Mov Cap-2 Maneuver | - | - | - | 168 |
| Stage 1 | - | - | - | 487 |
| Stage 2 | - | - | - | 535 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 29.4 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 183 | - | - | 846 | - |
| HCM Lane V/C Ratio | 0.196 | - | - | 0.005 | - |
| HCM Control Delay (s) | 29.4 | - | - | 9.3 | 0 |
| HCM Lane LOS | D | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 69 | 3 | 518 | 668 | 3 |
| Future Vol, veh/h | 4 | 69 | 3 | 518 | 668 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 65 | 65 | 93 | 93 | 77 | 77 |
| Heavy Vehicles, % | 5 | 5 | 4 | 4 | 3 | 3 |
| Mvmt Flow | 6 | 106 | 3 | 557 | 868 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1433 | 870 | 872 | 0 | 0 |
| Stage 1 | 870 | - | - | - | - |
| Stage 2 | 563 | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 145 | 347 | 765 | - | - |
| Stage 1 | 405 | - | - | - | - |
| Stage 2 | 564 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 144 | 347 | 765 | - | - |
| Mov Cap-2 Maneuver | 144 | - | - | - | - |
| Stage 1 | 403 | - | - | - | - |
| Stage 2 | 564 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 22.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 765 | - | 322 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.349 | - | - |
| HCM Control Delay (s) | 9.7 | 0 | 22.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.5 | - | - |

HCM 6th TWSC

19: E Cherokee Dr & Macedonia Elementary

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 33.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 148 | 117 | 325 | 183 | 115 | 428 |
| Future Vol, veh/h | 148 | 117 | 325 | 183 | 115 | 428 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | 235 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 61 | 61 | 86 | 86 | 84 | 84 |
| Heavy Vehicles, % | 0 | 0 | 3 | 3 | 1 | 1 |
| Mvmt Flow | 243 | 192 | 378 | 213 | 137 | 510 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1162 | 378 | 0 | 0 | 591 |
| Stage 1 | 378 | - | - | - | - |
| Stage 2 | 784 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.11 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.209 |
| Pot Cap-1 Maneuver | ~ 218 | 673 | - | - | 990 |
| Stage 1 | 697 | - | - | - | - |
| Stage 2 | 453 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 188 | 673 | - | - | 990 |
| Mov Cap-2 Maneuver | ~ 188 | - | - | - | - |
| Stage 1 | 697 | - | - | - | - |
| Stage 2 | 390 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 124.8 | 0 | 2 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 188 | 673 | 990 | - |
| HCM Lane V/C Ratio | - | - | 1.291 | 0.285 | 0.138 | - |
| HCM Control Delay (s) | - | - | 213.6 | 12.5 | 9.2 | - |
| HCM Lane LOS | - | - | F | B | A | - |
| HCM 95th %tile Q(veh) | - | - | 13.5 | 1.2 | 0.5 | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Future Volume (vph) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 26.0 | 68.0 | 68.0 | 16.0 | 58.0 | 58.0 | 17.0 | 33.0 | 33.0 | 13.0 | 29.0 | 29.0 |
| Total Split (%) | 20.0% | 52.3% | 52.3% | 12.3% | 44.6% | 44.6% | 13.1% | 25.4% | 25.4% | 10.0% | 22.3% | 22.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 69.6 | 62.5 | 62.5 | 74.1 | 69.2 | 69.2 | 37.6 | 27.4 | 27.4 | 30.0 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.57 | 0.53 | 0.53 | 0.29 | 0.21 | 0.21 | 0.23 | 0.18 | 0.18 |
| v/c Ratio | 0.08 | 0.29 | 0.21 | 0.27 | 0.27 | 0.11 | 0.86 | 0.49 | 0.37 | 0.48 | 0.79 | 0.14 |
| Control Delay | 11.5 | 20.8 | 3.3 | 13.3 | 17.7 | 0.3 | 70.6 | 50.4 | 7.3 | 42.5 | 69.4 | 0.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.5 | 20.8 | 3.3 | 13.3 | 17.7 | 0.3 | 70.6 | 50.4 | 7.3 | 42.5 | 69.4 | 0.7 |
| LOS | B | C | A | B | B | A | E | D | A | D | E | A |
| Approach Delay | | 17.1 | | | 15.3 | | | 44.1 | | | 52.7 | |
| Approach LOS | | B | | | B | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 129.7 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.86 | |
| Intersection Signal Delay: 27.7 | Intersection LOS: C |
| Intersection Capacity Utilization 60.7% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Future Volume (veh/h) | 31 | 614 | 152 | 101 | 629 | 87 | 180 | 172 | 159 | 115 | 228 | 51 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1767 | 1767 | 1767 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 34 | 675 | 0 | 109 | 676 | 0 | 196 | 187 | 173 | 131 | 259 | 58 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 9 | 9 | 9 | 10 | 10 | 10 | 6 | 6 | 6 | 5 | 5 | 5 |
| Cap, veh/h | 434 | 2340 | | 444 | 2409 | | 248 | 385 | 326 | 272 | 332 | 281 |
| Arrive On Green | 0.04 | 0.49 | 0.00 | 0.06 | 0.50 | 0.00 | 0.08 | 0.21 | 0.21 | 0.05 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1682 | 4823 | 1497 | 1668 | 4782 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 34 | 675 | 0 | 109 | 676 | 0 | 196 | 187 | 173 | 131 | 259 | 58 |
| Grp Sat Flow(s),veh/h/ln | 1682 | 1608 | 1497 | 1668 | 1594 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 1.3 | 10.8 | 0.0 | 4.1 | 10.5 | 0.0 | 10.8 | 11.7 | 12.9 | 7.0 | 17.4 | 4.1 |
| Cycle Q Clear(g_c), s | 1.3 | 10.8 | 0.0 | 4.1 | 10.5 | 0.0 | 10.8 | 11.7 | 12.9 | 7.0 | 17.4 | 4.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 434 | 2340 | | 444 | 2409 | | 248 | 385 | 326 | 272 | 332 | 281 |
| V/C Ratio(X) | 0.08 | 0.29 | | 0.25 | 0.28 | | 0.79 | 0.49 | 0.53 | 0.48 | 0.78 | 0.21 |
| Avail Cap(c_a), veh/h | 616 | 2340 | | 465 | 2409 | | 248 | 385 | 326 | 272 | 332 | 281 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.9 | 19.9 | 0.0 | 14.7 | 18.5 | 0.0 | 42.4 | 44.5 | 45.0 | 41.8 | 50.3 | 44.8 |
| Incr Delay (d2), s/veh | 0.1 | 0.3 | 0.0 | 0.3 | 0.3 | 0.0 | 15.7 | 4.3 | 6.0 | 1.3 | 16.6 | 1.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 4.0 | 0.0 | 1.5 | 3.8 | 0.0 | 6.1 | 5.6 | 5.3 | 3.5 | 9.3 | 1.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 14.9 | 20.2 | 0.0 | 15.0 | 18.8 | 0.0 | 58.1 | 48.9 | 51.1 | 43.2 | 66.8 | 46.5 |
| LnGrp LOS | B | C | | B | B | | E | D | D | D | E | D |
| Approach Vol, veh/h | | 709 | A | | 785 | A | | 556 | | | 448 | |
| Approach Delay, s/veh | | 19.9 | | | 18.2 | | | 52.8 | | | 57.3 | |
| Approach LOS | | B | | | B | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.0 | 70.8 | 17.0 | 29.0 | 14.4 | 68.4 | 13.0 | 33.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 19.6 | 52.1 | * 11 | * 23 | 9.4 | * 63 | 7.0 | * 27 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 12.5 | 12.8 | 19.4 | 6.1 | 12.8 | 9.0 | 14.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.8 | 0.0 | 0.5 | 0.1 | 4.9 | 0.0 | 1.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 33.4 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | T | T | R | L | L | TR | L |
| Maximum Queue (ft) | 200 | 238 | 262 | 470 | 194 | 287 | 271 | 53 | 149 | 174 | 272 | 132 |
| Average Queue (ft) | 62 | 162 | 99 | 145 | 162 | 204 | 187 | 26 | 47 | 120 | 91 | 42 |
| 95th Queue (ft) | 143 | 235 | 232 | 285 | 233 | 290 | 269 | 50 | 138 | 185 | 199 | 97 |
| Link Distance (ft) | | 925 | 925 | 925 | | 390 | 390 | | | | | 608 |
| Upstream Blk Time (%) | | | | | | | | | | | | 0 |
| Queuing Penalty (veh) | | | | | | | | | | | | 0 |
| Storage Bay Dist (ft) | 315 | | | | 145 | | | 340 | 125 | 125 | | 135 |
| Storage Blk Time (%) | | | | | 12 | 13 | | | 0 | 8 | 1 | 0 |
| Queuing Penalty (veh) | | | | | 49 | 32 | | | 1 | 10 | 2 | 0 |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | R |
| Maximum Queue (ft) | 151 | 128 |
| Average Queue (ft) | 72 | 46 |
| 95th Queue (ft) | 134 | 104 |
| Link Distance (ft) | 132 | |
| Upstream Blk Time (%) | 3 | 0 |
| Queuing Penalty (veh) | 0 | 0 |
| Storage Bay Dist (ft) | | 135 |
| Storage Blk Time (%) | 3 | 0 |
| Queuing Penalty (veh) | 6 | 0 |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | L | LR |
| Maximum Queue (ft) | 78 | 52 |
| Average Queue (ft) | 8 | 24 |
| 95th Queue (ft) | 38 | 53 |
| Link Distance (ft) | | 336 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | NB | SB | SB |
|-----------------------|-----|-----|-----|----|
| Directions Served | L | LTR | LT | R |
| Maximum Queue (ft) | 25 | 62 | 70 | 45 |
| Average Queue (ft) | 6 | 11 | 25 | 26 |
| 95th Queue (ft) | 24 | 36 | 51 | 45 |
| Link Distance (ft) | | 511 | 805 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | | | 75 |
| Storage Blk Time (%) | | | 0 | |
| Queuing Penalty (veh) | | | 0 | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 31 | 169 | 59 |
| Average Queue (ft) | 6 | 80 | 25 |
| 95th Queue (ft) | 25 | 142 | 50 |
| Link Distance (ft) | | 636 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 135 |
| Storage Blk Time (%) | | 1 | |
| Queuing Penalty (veh) | | 1 | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 9 | 22 | 58 | 48 |
| Average Queue (ft) | 0 | 1 | 16 | 12 |
| 95th Queue (ft) | 3 | 7 | 38 | 38 |
| Link Distance (ft) | | | 532 | 436 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB | SB |
|-----------------------|-----|----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 31 | 86 | 89 |
| Average Queue (ft) | 3 | 32 | 17 |
| 95th Queue (ft) | 17 | 66 | 45 |
| Link Distance (ft) | 272 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | 1 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | NB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 45 |
| Average Queue (ft) | 15 |
| 95th Queue (ft) | 41 |
| Link Distance (ft) | 594 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB | SB |
|-----------------------|-----|----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 28 | 92 | 77 |
| Average Queue (ft) | 4 | 30 | 29 |
| 95th Queue (ft) | 21 | 65 | 60 |
| Link Distance (ft) | 464 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | 1 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 43 | 23 | 90 | 68 |
| Average Queue (ft) | 9 | 4 | 15 | 35 |
| 95th Queue (ft) | 29 | 17 | 50 | 60 |
| Link Distance (ft) | | | 630 | 204 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 943 | 350 | 514 | 400 | 225 | 444 | 420 | 170 | 1293 | 525 |
| Average Queue (ft) | 336 | 838 | 139 | 252 | 14 | 142 | 240 | 111 | 123 | 641 | 307 |
| 95th Queue (ft) | 496 | 1144 | 260 | 403 | 137 | 251 | 409 | 235 | 223 | 1127 | 645 |
| Link Distance (ft) | | 904 | | 677 | | | 2410 | | | 1376 | |
| Upstream Blk Time (%) | | 50 | | | | | | | | | |
| Queuing Penalty (veh) | | 0 | | | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 350 | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 6 | 51 | | 6 | | 6 | 26 | 1 | 14 | 63 | |
| Queuing Penalty (veh) | 40 | 169 | | 18 | | 36 | 103 | 4 | 110 | 308 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | EB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 97 | 29 | 53 | 22 |
| Average Queue (ft) | 38 | 1 | 12 | 1 |
| 95th Queue (ft) | 83 | 10 | 39 | 8 |
| Link Distance (ft) | 350 | | | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 100 | 160 | 100 |
| Storage Blk Time (%) | 0 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | L | LR |
| Maximum Queue (ft) | 27 | 58 |
| Average Queue (ft) | 4 | 17 |
| 95th Queue (ft) | 19 | 42 |
| Link Distance (ft) | | 759 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LT | LTR |
| Maximum Queue (ft) | 148 | 30 |
| Average Queue (ft) | 64 | 1 |
| 95th Queue (ft) | 120 | 10 |
| Link Distance (ft) | 599 | 581 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | L | T |
| Maximum Queue (ft) | 224 | 245 | 225 | 118 | 428 | 245 | 95 | 162 | 216 | 242 |
| Average Queue (ft) | 33 | 128 | 8 | 44 | 189 | 60 | 37 | 81 | 129 | 113 |
| 95th Queue (ft) | 102 | 215 | 77 | 90 | 310 | 233 | 79 | 149 | 205 | 193 |
| Link Distance (ft) | | 3756 | | | 1100 | | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 195 | 185 | | 190 | |
| Storage Blk Time (%) | | 2 | | | 6 | | | | 2 | 1 |
| Queuing Penalty (veh) | | 3 | | | 19 | | | | 6 | 2 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 52 | 139 |
| Average Queue (ft) | 16 | 13 |
| 95th Queue (ft) | 42 | 67 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 56 | 28 |
| Average Queue (ft) | 28 | 5 |
| 95th Queue (ft) | 54 | 22 |
| Link Distance (ft) | 611 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 235 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | NB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 49 |
| Average Queue (ft) | 19 |
| 95th Queue (ft) | 44 |
| Link Distance (ft) | 510 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 54 | 51 |
| Average Queue (ft) | 33 | 3 |
| 95th Queue (ft) | 58 | 21 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | R | L |
| Maximum Queue (ft) | 312 | 22 | 74 |
| Average Queue (ft) | 70 | 1 | 29 |
| 95th Queue (ft) | 167 | 8 | 55 |
| Link Distance (ft) | 478 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 200 | 235 |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|
| Directions Served | L | T | T | T | R | L | T | T | T | L | T | R |
| Maximum Queue (ft) | 84 | 350 | 298 | 161 | 99 | 93 | 200 | 165 | 129 | 254 | 236 | 87 |
| Average Queue (ft) | 16 | 168 | 120 | 28 | 4 | 40 | 124 | 90 | 40 | 123 | 102 | 43 |
| 95th Queue (ft) | 53 | 251 | 222 | 94 | 34 | 73 | 184 | 158 | 104 | 217 | 184 | 70 |
| Link Distance (ft) | | 714 | 714 | 714 | | | 1292 | 1292 | 1292 | | 592 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | 225 | 500 | | | | 230 | | 550 |
| Storage Blk Time (%) | | 2 | | | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | | | | | | | | 1 | 1 | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | SB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | T | R |
| Maximum Queue (ft) | 155 | 319 | 270 |
| Average Queue (ft) | 75 | 166 | 41 |
| 95th Queue (ft) | 140 | 261 | 150 |
| Link Distance (ft) | | 762 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 220 | | 220 |
| Storage Blk Time (%) | | 4 | |
| Queuing Penalty (veh) | | 7 | |

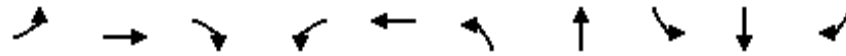
Network Summary

| |
|-----------------------------------|
| Network wide Queuing Penalty: 930 |
|-----------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 4.8 | 4.8 | 4.8 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 15.0 | 98.0 | 98.0 | 20.0 | 103.0 | 42.0 | 47.0 | 15.0 | 20.0 | 20.0 |
| Total Split (%) | 8.3% | 54.4% | 54.4% | 11.1% | 57.2% | 23.3% | 26.1% | 8.3% | 11.1% | 11.1% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 60.0 | 53.0 | 53.0 | 72.9 | 64.9 | 56.9 | 41.1 | 34.5 | 25.7 | 25.7 |
| Actuated g/C Ratio | 0.42 | 0.37 | 0.37 | 0.51 | 0.46 | 0.40 | 0.29 | 0.24 | 0.18 | 0.18 |
| v/c Ratio | 0.10 | 0.76 | 0.55 | 0.64 | 0.64 | 0.57 | 0.34 | 0.05 | 0.04 | 0.06 |
| Control Delay | 17.4 | 42.4 | 8.3 | 31.3 | 31.9 | 35.1 | 8.0 | 33.7 | 59.0 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 17.4 | 42.4 | 8.3 | 31.3 | 31.9 | 35.1 | 8.0 | 33.7 | 59.0 | 0.2 |
| LOS | B | D | A | C | C | D | A | C | E | A |
| Approach Delay | | 31.5 | | | 31.8 | | 28.3 | | 26.3 | |
| Approach LOS | | C | | | C | | C | | C | |

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 141.6

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 30.8

Intersection LOS: C

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| | | | |
|------|-------|------|------|
| Ø1 | Ø2 | Ø3 | Ø4 |
| 15 s | 103 s | 42 s | 20 s |
| Ø5 | Ø6 | Ø7 | Ø8 |
| 20 s | 98 s | 15 s | 47 s |

HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 189 | 1321 | 589 | 222 | 1489 | 664 | 1233 | 574 | | 471 | 396 | 336 |
| Arrive On Green | 0.02 | 0.37 | 0.37 | 0.07 | 0.42 | 0.00 | 0.17 | 0.30 | 0.00 | 0.07 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1795 | 3582 | 1598 | 1781 | 3554 | 1585 | 3483 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1791 | 1598 | 1781 | 1777 | 1585 | 1742 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 1.0 | 33.4 | 34.5 | 7.3 | 32.0 | 0.0 | 18.2 | 0.4 | 0.0 | 0.9 | 0.8 | 1.5 |
| Cycle Q Clear(g_c), s | 1.0 | 33.4 | 34.5 | 7.3 | 32.0 | 0.0 | 18.2 | 0.4 | 0.0 | 0.9 | 0.8 | 1.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 189 | 1321 | 589 | 222 | 1489 | 664 | 1233 | 574 | | 471 | 396 | 336 |
| V/C Ratio(X) | 0.11 | 0.77 | 0.79 | 0.73 | 0.70 | 0.00 | 0.51 | 0.01 | | 0.03 | 0.04 | 0.07 |
| Avail Cap(c_a), veh/h | 271 | 2436 | 1087 | 280 | 2550 | 1137 | 1600 | 574 | | 471 | 396 | 336 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.8 | 37.2 | 37.6 | 29.7 | 31.9 | 0.0 | 30.5 | 32.5 | 0.0 | 35.6 | 42.3 | 42.5 |
| Incr Delay (d2), s/veh | 0.3 | 1.0 | 2.4 | 7.0 | 0.6 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.2 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 14.8 | 13.7 | 3.5 | 13.8 | 0.0 | 7.6 | 0.2 | 0.0 | 0.4 | 0.4 | 0.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.0 | 38.2 | 39.9 | 36.7 | 32.5 | 0.0 | 30.8 | 32.6 | 0.0 | 35.7 | 42.4 | 42.9 |
| LnGrp LOS | C | D | D | D | C | A | C | C | | D | D | D |
| Approach Vol, veh/h | | 1498 | | | 1198 | | | 643 | A | | 52 | |
| Approach Delay, s/veh | | 38.6 | | | 33.1 | | | 30.8 | | | 40.6 | |
| Approach LOS | | D | | | C | | | C | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.9 | 63.0 | 27.9 | 34.1 | 15.7 | 56.3 | 15.0 | 47.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 96.1 | 36.5 | * 14 | * 14 | 91.1 | * 8.8 | * 41 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.0 | 34.0 | 20.2 | 3.5 | 9.3 | 36.5 | 2.9 | 2.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 10.1 | 2.2 | 0.0 | 0.2 | 12.9 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 35.2 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 28 | 1119 | 984 | 7 | 1 | 23 |
| Future Vol, veh/h | 28 | 1119 | 984 | 7 | 1 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 87 | 87 | 60 | 60 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 32 | 1272 | 1131 | 8 | 2 | 38 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1139 | 0 | - | 0 | 2471 | 1135 |
| Stage 1 | - | - | - | - | 1135 | - |
| Stage 2 | - | - | - | - | 1336 | - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 617 | - | - | - | 34 | 249 |
| Stage 1 | - | - | - | - | 309 | - |
| Stage 2 | - | - | - | - | 248 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 617 | - | - | - | 32 | 249 |
| Mov Cap-2 Maneuver | - | - | - | - | 32 | - |
| Stage 1 | - | - | - | - | 293 | - |
| Stage 2 | - | - | - | - | 248 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.3 | 0 | | 28.3 | | |
| HCM LOS | | | | D | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 617 | - | - | - | 194 | |
| HCM Lane V/C Ratio | 0.052 | - | - | - | 0.206 | |
| HCM Control Delay (s) | 11.2 | - | - | - | 28.3 | |
| HCM Lane LOS | B | - | - | - | D | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.8 | |

HCM 6th TWSC

3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 59 | 771 | 17 | 5 | 840 | 20 | 8 | 0 | 2 | 8 | 4 | 36 |
| Future Vol, veh/h | 59 | 771 | 17 | 5 | 840 | 20 | 8 | 0 | 2 | 8 | 4 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 75 | 235 | - | 175 | - | - | - | - | - | 75 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 91 | 91 | 91 | 50 | 50 | 50 | 93 | 93 | 93 |
| Heavy Vehicles, % | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 67 | 876 | 19 | 5 | 923 | 22 | 16 | 0 | 4 | 9 | 4 | 39 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|-----|
| Conflicting Flow All | 945 | 0 | 0 | 895 | 0 | 0 | 1976 | 876 | 1955 | 1962 | 923 | |
| Stage 1 | - | - | - | - | - | - | 1010 | 1010 | - | 933 | 933 | - |
| Stage 2 | - | - | - | - | - | - | 966 | 955 | - | 1022 | 1029 | - |
| Critical Hdwy | 4.11 | - | - | 4.13 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.227 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 730 | - | - | 754 | - | - | 47 | 64 | 351 | 49 | 64 | 330 |
| Stage 1 | - | - | - | - | - | - | 292 | 320 | - | 322 | 348 | - |
| Stage 2 | - | - | - | - | - | - | 309 | 339 | - | 287 | 314 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 730 | - | - | 754 | - | - | 36 | 58 | 351 | 45 | 58 | 330 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 36 | 58 | - | 45 | 58 | - |
| Stage 1 | - | - | - | - | - | - | 265 | 291 | - | 292 | 346 | - |
| Stage 2 | - | - | - | - | - | - | 268 | 337 | - | 258 | 285 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-------|------|
| HCM Control Delay, s | 0.7 | 0.1 | 142.4 | 38.8 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 44 | 730 | - | - | 754 | - | - | 49 | 330 |
| HCM Lane V/C Ratio | 0.455 | 0.092 | - | - | 0.007 | - | - | 0.263 | 0.117 |
| HCM Control Delay (s) | 142.4 | 10.4 | - | - | 9.8 | - | - | 102.9 | 17.4 |
| HCM Lane LOS | F | B | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 1.6 | 0.3 | - | - | 0 | - | - | 0.9 | 0.4 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 7.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 90 | 712 | 789 | 111 | 59 | 42 |
| Future Vol, veh/h | 90 | 712 | 789 | 111 | 59 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 175 | 0 | 135 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 93 | 93 | 82 | 82 |
| Heavy Vehicles, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Mvmt Flow | 95 | 749 | 848 | 119 | 72 | 51 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 967 | 0 | - | 0 | 1787 | 848 |
| Stage 1 | - | - | - | - | 848 | - |
| Stage 2 | - | - | - | - | 939 | - |
| Critical Hdwy | 4.11 | - | - | - | 6.45 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 | - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.545 | 3.345 |
| Pot Cap-1 Maneuver | 716 | - | - | - | 88 | 357 |
| Stage 1 | - | - | - | - | 415 | - |
| Stage 2 | - | - | - | - | 376 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 716 | - | - | - | 76 | 357 |
| Mov Cap-2 Maneuver | - | - | - | - | 76 | - |
| Stage 1 | - | - | - | - | 360 | - |
| Stage 2 | - | - | - | - | 376 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 1.2 | 0 | | 113.8 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 716 | - | - | - | 76 | 357 |
| HCM Lane V/C Ratio | 0.132 | - | - | - | 0.947 | 0.143 |
| HCM Control Delay (s) | 10.8 | - | - | - | 182.9 | 16.8 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.5 | - | - | - | 4.9 | 0.5 |

HCM 6th TWSC
5: Village Ct/Little Brook Dr & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 19 | 739 | 37 | 21 | 831 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Future Vol, veh/h | 19 | 739 | 37 | 21 | 831 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 175 | 175 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 91 | 91 | 91 | 73 | 73 | 73 | 50 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 22 | 869 | 44 | 23 | 913 | 5 | 37 | 3 | 12 | 6 | 0 | 14 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|------|------|
| Conflicting Flow All | 918 | 0 | 0 | 913 | 0 | 0 | 1882 | 1877 | 869 | 1905 | 1919 | 916 |
| Stage 1 | - | - | - | - | - | - | 913 | 913 | - | 962 | 962 | - |
| Stage 2 | - | - | - | - | - | - | 969 | 964 | - | 943 | 957 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.13 | 6.53 | 6.23 | 7.2 | 6.6 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.527 | 4.027 | 3.327 | 3.59 | 4.09 | 3.39 |
| Pot Cap-1 Maneuver | 747 | - | - | 746 | - | - | 54 | 71 | 350 | 50 | 64 | 319 |
| Stage 1 | - | - | - | - | - | - | 326 | 351 | - | 297 | 324 | - |
| Stage 2 | - | - | - | - | - | - | 304 | 332 | - | 305 | 326 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 747 | - | - | 746 | - | - | 49 | 67 | 350 | 45 | 60 | 319 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 49 | 67 | - | 45 | 60 | - |
| Stage 1 | - | - | - | - | - | - | 317 | 341 | - | 288 | 314 | - |
| Stage 2 | - | - | - | - | - | - | 282 | 322 | - | 283 | 317 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-----|------|
| HCM Control Delay, s | 0.2 | 0.2 | 174 | 43.6 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 63 | 747 | - | - | 746 | - | - | 113 |
| HCM Lane V/C Ratio | 0.826 | 0.03 | - | - | 0.031 | - | - | 0.177 |
| HCM Control Delay (s) | 174 | 10 | - | - | 10 | - | - | 43.6 |
| HCM Lane LOS | F | A | - | - | A | - | - | E |
| HCM 95th %tile Q(veh) | 3.8 | 0.1 | - | - | 0.1 | - | - | 0.6 |

HCM 6th TWSC
6: E Cherokee Dr & Avery Creek Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 54 | 699 | 723 | 57 | 28 | 43 |
| Future Vol, veh/h | 54 | 699 | 723 | 57 | 28 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 150 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 88 | 88 | 71 | 71 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 58 | 752 | 822 | 65 | 39 | 61 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 887 | 0 | - | 0 | 1690 822 |
| Stage 1 | - | - | - | - | 822 - |
| Stage 2 | - | - | - | - | 868 - |
| Critical Hdwy | 4.11 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 768 | - | - | - | 102 372 |
| Stage 1 | - | - | - | - | 430 - |
| Stage 2 | - | - | - | - | 409 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 768 | - | - | - | 94 372 |
| Mov Cap-2 Maneuver | - | - | - | - | 94 - |
| Stage 1 | - | - | - | - | 397 - |
| Stage 2 | - | - | - | - | 409 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 37.1 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 768 | - | - | - | 94 | 372 |
| HCM Lane V/C Ratio | 0.076 | - | - | - | 0.42 | 0.163 |
| HCM Control Delay (s) | 10.1 | - | - | - | 68.5 | 16.6 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 1.7 | 0.6 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 722 | 12 | 8 | 782 | 7 | 11 |
| Future Vol, veh/h | 722 | 12 | 8 | 782 | 7 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 87 | 87 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 776 | 13 | 9 | 899 | 14 | 22 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 789 | 0 |
| Stage 1 | - | - | - | 776 |
| Stage 2 | - | - | - | 917 |
| Critical Hdwy | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | - | - | 831 | - |
| Stage 1 | - | - | - | 457 |
| Stage 2 | - | - | - | 393 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 831 | - |
| Mov Cap-2 Maneuver | - | - | - | 101 |
| Stage 1 | - | - | - | 457 |
| Stage 2 | - | - | - | 384 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 28.9 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 186 | - | - | 831 | - |
| HCM Lane V/C Ratio | 0.194 | - | - | 0.011 | - |
| HCM Control Delay (s) | 28.9 | - | - | 9.4 | 0 |
| HCM Lane LOS | D | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0 | - |

HCM 6th TWSC
8: E Cherokee Dr & Bradshaw Club Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 50 | 680 | 730 | 38 | 37 | 55 |
| Future Vol, veh/h | 50 | 680 | 730 | 38 | 37 | 55 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 180 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 89 | 89 | 64 | 64 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 1 | 1 |
| Mvmt Flow | 56 | 764 | 820 | 43 | 58 | 86 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 863 | 0 | - | 0 | 1696 820 |
| Stage 1 | - | - | - | - | 820 - |
| Stage 2 | - | - | - | - | 876 - |
| Critical Hdwy | 4.11 | - | - | - | 6.41 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.41 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.41 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.509 3.309 |
| Pot Cap-1 Maneuver | 784 | - | - | - | 102 376 |
| Stage 1 | - | - | - | - | 435 - |
| Stage 2 | - | - | - | - | 409 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 784 | - | - | - | 95 376 |
| Mov Cap-2 Maneuver | - | - | - | - | 95 - |
| Stage 1 | - | - | - | - | 404 - |
| Stage 2 | - | - | - | - | 409 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 46.4 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 784 | - | - | - | 95 | 376 |
| HCM Lane V/C Ratio | 0.072 | - | - | - | 0.609 | 0.229 |
| HCM Control Delay (s) | 9.9 | - | - | - | 89.5 | 17.4 |
| HCM Lane LOS | A | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 2.9 | 0.9 |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 55 | 769 | 3 | 3 | 769 | 8 | 0 | 0 | 6 | 0 | 1 | 61 |
| Future Vol, veh/h | 55 | 769 | 3 | 3 | 769 | 8 | 0 | 0 | 6 | 0 | 1 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | - | 235 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 96 | 96 | 96 | 42 | 42 | 42 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 59 | 827 | 3 | 3 | 801 | 8 | 0 | 0 | 14 | 0 | 1 | 69 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 809 | 0 | 0 | 830 | 0 | 0 | 1793 | 1762 | 829 | 1765 | 1759 | 805 |
| Stage 1 | - | - | - | - | - | - | 947 | 947 | - | 811 | 811 | - |
| Stage 2 | - | - | - | - | - | - | 846 | 815 | - | 954 | 948 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 821 | - | - | 802 | - | - | 63 | 85 | 374 | 66 | 86 | 386 |
| Stage 1 | - | - | - | - | - | - | 316 | 342 | - | 376 | 396 | - |
| Stage 2 | - | - | - | - | - | - | 360 | 394 | - | 313 | 342 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 821 | - | - | 802 | - | - | 48 | 79 | 374 | 60 | 79 | 386 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 48 | 79 | - | 60 | 79 | - |
| Stage 1 | - | - | - | - | - | - | 293 | 317 | - | 349 | 394 | - |
| Stage 2 | - | - | - | - | - | - | 293 | 392 | - | 279 | 317 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 15 | 17.3 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 374 | 821 | - | - | 802 | - | - | 363 |
| HCM Lane V/C Ratio | 0.038 | 0.072 | - | - | 0.004 | - | - | 0.194 |
| HCM Control Delay (s) | 15 | 9.7 | - | - | 9.5 | - | - | 17.3 |
| HCM Lane LOS | C | A | - | - | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | 0.2 | - | - | 0 | - | - | 0.7 |

Timings

10: E Cherokee Dr & Hickory Rd

08/17/2020

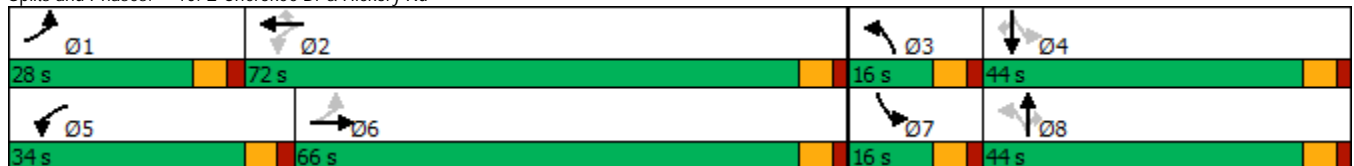


| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 279 | 470 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Future Volume (vph) | 279 | 470 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 28.0 | 66.0 | 34.0 | 72.0 | 72.0 | 16.0 | 44.0 | 44.0 | 16.0 | 44.0 | 44.0 |
| Total Split (%) | 17.5% | 41.3% | 21.3% | 45.0% | 45.0% | 10.0% | 27.5% | 27.5% | 10.0% | 27.5% | 27.5% |
| 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) | 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 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 83.5 | 61.5 | 92.5 | 66.0 | 66.0 | 48.2 | 38.4 | 38.4 | 47.4 | 38.0 | 38.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | 0.58 | 0.41 | 0.41 | 0.30 | 0.24 | 0.24 | 0.30 | 0.24 | 0.24 |
| v/c Ratio | 1.08 | 0.87 | 0.90 | 1.01 | 0.19 | 0.75 | 0.90 | 0.58 | 0.58 | 1.04 | 0.53 |
| Control Delay | 123.4 | 60.0 | 63.9 | 80.0 | 9.7 | 67.2 | 82.6 | 19.9 | 52.5 | 110.5 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 123.4 | 60.0 | 63.9 | 80.0 | 9.7 | 67.2 | 82.6 | 19.9 | 52.5 | 110.5 | 7.9 |
| LOS | F | E | E | E | A | E | F | B | D | F | A |
| Approach Delay | | 81.4 | | 67.9 | | | 56.6 | | | 66.0 | |
| Approach LOS | | F | | E | | | E | | | E | |

Intersection Summary

| | |
|--|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 159.8 | |
| Natural Cycle: 170 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.08 | |
| Intersection Signal Delay: 68.2 | Intersection LOS: E |
| Intersection Capacity Utilization 101.4% | ICU Level of Service G |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 279 | 470 | 77 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Future Volume (veh/h) | 279 | 470 | 77 | 317 | 726 | 128 | 109 | 374 | 296 | 84 | 413 | 298 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 313 | 528 | 0 | 341 | 781 | 0 | 118 | 407 | 322 | 93 | 459 | 331 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Cap, veh/h | 290 | 796 | | 446 | 778 | | 155 | 468 | 397 | 166 | 445 | 377 |
| Arrive On Green | 0.14 | 0.43 | 0.00 | 0.13 | 0.41 | 0.00 | 0.06 | 0.25 | 0.25 | 0.05 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 313 | 528 | 0 | 341 | 781 | 0 | 118 | 407 | 322 | 93 | 459 | 331 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 0 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 22.0 | 36.1 | 0.0 | 17.3 | 66.0 | 0.0 | 7.9 | 33.1 | 30.3 | 6.3 | 38.0 | 32.2 |
| Cycle Q Clear(g_c), s | 22.0 | 36.1 | 0.0 | 17.3 | 66.0 | 0.0 | 7.9 | 33.1 | 30.3 | 6.3 | 38.0 | 32.2 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 290 | 796 | | 446 | 778 | | 155 | 468 | 397 | 166 | 445 | 377 |
| V/C Ratio(X) | 1.08 | 0.66 | | 0.77 | 1.00 | | 0.76 | 0.87 | 0.81 | 0.56 | 1.03 | 0.88 |
| Avail Cap(c_a), veh/h | 290 | 796 | | 535 | 778 | | 157 | 468 | 397 | 186 | 445 | 377 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.1 | 36.8 | 0.0 | 27.0 | 46.9 | 0.0 | 46.5 | 57.6 | 56.6 | 46.2 | 60.9 | 58.7 |
| Incr Delay (d2), s/veh | 75.3 | 4.3 | 0.0 | 5.4 | 33.0 | 0.0 | 18.9 | 17.1 | 13.5 | 2.9 | 51.2 | 24.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 17.6 | 17.6 | 0.0 | 8.1 | 37.9 | 0.0 | 4.4 | 18.1 | 13.8 | 2.9 | 24.4 | 15.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 131.3 | 41.1 | 0.0 | 32.4 | 80.0 | 0.0 | 65.4 | 74.7 | 70.1 | 49.1 | 112.1 | 82.7 |
| LnGrp LOS | F | D | | C | F | | E | E | E | D | F | F |
| Approach Vol, veh/h | | 841 | A | | 1122 | A | | 847 | | | 883 | |
| Approach Delay, s/veh | | 74.7 | | | 65.5 | | | 71.6 | | | 94.4 | |
| Approach LOS | | E | | | E | | | E | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 28.0 | 72.0 | 15.8 | 44.0 | 26.0 | 74.0 | 14.2 | 45.7 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 22.0 | 66.0 | 10.0 | 38.0 | 28.0 | 60.0 | 10.0 | 38.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 24.0 | 68.0 | 9.9 | 40.0 | 19.3 | 38.1 | 8.3 | 35.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 6.4 | 0.0 | 1.7 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 75.9 | | | | | | | | | | | |
| HCM 6th LOS | E | | | | | | | | | | | |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 4.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 106 | 65 | 73 | 471 | 443 | 116 |
| Future Vol, veh/h | 106 | 65 | 73 | 471 | 443 | 116 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 100 | 160 | - | - | 100 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 93 | 93 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 116 | 71 | 78 | 506 | 487 | 127 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1149 | 487 | 614 | 0 | 0 |
| Stage 1 | 487 | - | - | - | - |
| Stage 2 | 662 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 220 | 583 | 975 | - | - |
| Stage 1 | 620 | - | - | - | - |
| Stage 2 | 515 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 202 | 583 | 975 | - | - |
| Mov Cap-2 Maneuver | 202 | - | - | - | - |
| Stage 1 | 570 | - | - | - | - |
| Stage 2 | 515 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 32.2 | 1.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 975 | - | 202 | 583 | - | - |
| HCM Lane V/C Ratio | 0.081 | - | 0.577 | 0.123 | - | - |
| HCM Control Delay (s) | 9 | - | 44.6 | 12 | - | - |
| HCM Lane LOS | A | - | E | B | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 3.2 | 0.4 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 49 | 531 | 521 | 3 | 3 | 36 |
| Future Vol, veh/h | 49 | 531 | 521 | 3 | 3 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 52 | 565 | 560 | 3 | 4 | 43 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 563 | 0 | - | 0 | 1231 562 |
| Stage 1 | - | - | - | - | 562 - |
| Stage 2 | - | - | - | - | 669 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 1019 | - | - | - | 198 530 |
| Stage 1 | - | - | - | - | 575 - |
| Stage 2 | - | - | - | - | 513 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1019 | - | - | - | 188 530 |
| Mov Cap-2 Maneuver | - | - | - | - | 188 - |
| Stage 1 | - | - | - | - | 546 - |
| Stage 2 | - | - | - | - | 513 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 13.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1019 | - | - | - | 465 |
| HCM Lane V/C Ratio | 0.051 | - | - | - | 0.101 |
| HCM Control Delay (s) | 8.7 | - | - | - | 13.6 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.3 |

HCM 6th TWSC
13: E Cherokee Dr & Avery Rd/Thomas Rd

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 25.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | ↕ |
| Traffic Vol, veh/h | 159 | 6 | 3 | 4 | 5 | 10 | 1 | 538 | 3 | 4 | 517 | 248 |
| Future Vol, veh/h | 159 | 6 | 3 | 4 | 5 | 10 | 1 | 538 | 3 | 4 | 517 | 248 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 175 | - | - | - | - | - | - | - | - | 175 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 75 | 75 | 75 | 94 | 94 | 94 | 92 | 92 | 92 |
| Heavy Vehicles, % | 8 | 8 | 8 | 7 | 7 | 7 | 0 | 0 | 0 | 2 | 2 | 2 |
| Mvmt Flow | 189 | 7 | 4 | 5 | 7 | 13 | 1 | 572 | 3 | 4 | 562 | 270 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-------|-------|--------|---|---|--------|---|---|
| Conflicting Flow All | 1156 | 1147 | 562 | 1287 | 1416 | 574 | 832 | 0 | 0 | 575 | 0 | 0 |
| Stage 1 | 570 | 570 | - | 576 | 576 | - | - | - | - | - | - | - |
| Stage 2 | 586 | 577 | - | 711 | 840 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.18 | 6.58 | 6.28 | 7.17 | 6.57 | 6.27 | 4.1 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.572 | 4.072 | 3.372 | 3.563 | 4.063 | 3.363 | 2.2 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 169 | 194 | 515 | 138 | 134 | 509 | 809 | - | - | 998 | - | - |
| Stage 1 | 496 | 496 | - | 494 | 494 | - | - | - | - | - | - | - |
| Stage 2 | 486 | 492 | - | 416 | 374 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 157 | 192 | 515 | 132 | 133 | 509 | 809 | - | - | 998 | - | - |
| Mov Cap-2 Maneuver | ~ 157 | 192 | - | 132 | 133 | - | - | - | - | - | - | - |
| Stage 1 | 495 | 492 | - | 493 | 493 | - | - | - | - | - | - | - |
| Stage 2 | 466 | 491 | - | 404 | 371 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 204.5 | | | 23.8 | | | 0 | | | 0 | | |
| HCM LOS | F | | | C | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 809 | - | - | 158 | 515 | 217 | 998 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 1.243 | 0.007 | 0.117 | 0.004 | - | - |
| HCM Control Delay (s) | 9.5 | 0 | - | 208 | 12 | 23.8 | 8.6 | 0 | - |
| HCM Lane LOS | A | A | - | F | B | C | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 11.3 | 0 | 0.4 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Future Volume (vph) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 67.5 | 63.8 | 63.8 | 60.3 | 54.3 | 54.3 | 31.7 | 18.1 | 18.1 | 26.4 | 15.4 | 15.4 |
| Actuated g/C Ratio | 0.58 | 0.55 | 0.55 | 0.52 | 0.47 | 0.47 | 0.27 | 0.16 | 0.16 | 0.23 | 0.13 | 0.13 |
| v/c Ratio | 0.22 | 0.55 | 0.06 | 0.04 | 0.56 | 0.09 | 0.66 | 0.72 | 0.12 | 0.42 | 0.46 | 0.39 |
| Control Delay | 12.7 | 21.9 | 0.1 | 12.1 | 26.6 | 0.8 | 42.3 | 61.3 | 0.7 | 34.7 | 51.9 | 11.2 |
| 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 | 12.7 | 21.9 | 0.1 | 12.1 | 26.6 | 0.8 | 42.3 | 61.3 | 0.7 | 34.7 | 51.9 | 11.2 |
| LOS | B | C | A | B | C | A | D | E | A | C | D | B |
| Approach Delay | | 19.0 | | | 22.9 | | | 46.7 | | | 31.9 | |
| Approach LOS | | B | | | C | | | D | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 115.6 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.72 | |
| Intersection Signal Delay: 28.5 | Intersection LOS: C |
| Intersection Capacity Utilization 70.1% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Future Volume (veh/h) | 86 | 531 | 56 | 14 | 438 | 67 | 220 | 191 | 40 | 92 | 91 | 101 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 92 | 571 | 0 | 16 | 498 | 0 | 244 | 212 | 0 | 115 | 114 | 0 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.90 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cap, veh/h | 453 | 1021 | | 387 | 978 | | 338 | 264 | | 240 | 154 | |
| Arrive On Green | 0.04 | 0.54 | 0.00 | 0.01 | 0.51 | 0.00 | 0.13 | 0.14 | 0.00 | 0.08 | 0.08 | 0.00 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 92 | 571 | 0 | 16 | 498 | 0 | 244 | 212 | 0 | 115 | 114 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 2.5 | 20.9 | 0.0 | 0.4 | 18.1 | 0.0 | 12.6 | 11.4 | 0.0 | 6.1 | 6.2 | 0.0 |
| Cycle Q Clear(g_c), s | 2.5 | 20.9 | 0.0 | 0.4 | 18.1 | 0.0 | 12.6 | 11.4 | 0.0 | 6.1 | 6.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 453 | 1021 | | 387 | 978 | | 338 | 264 | | 240 | 154 | |
| V/C Ratio(X) | 0.20 | 0.56 | | 0.04 | 0.51 | | 0.72 | 0.80 | | 0.48 | 0.74 | |
| Avail Cap(c_a), veh/h | 619 | 1021 | | 603 | 978 | | 338 | 431 | | 345 | 431 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 12.6 | 15.8 | 0.0 | 13.3 | 16.7 | 0.0 | 36.0 | 43.7 | 0.0 | 40.0 | 47.1 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 2.2 | 0.0 | 0.0 | 1.9 | 0.0 | 7.4 | 5.6 | 0.0 | 1.5 | 6.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 8.6 | 0.0 | 0.2 | 7.7 | 0.0 | 6.0 | 5.5 | 0.0 | 2.7 | 3.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.9 | 18.0 | 0.0 | 13.4 | 18.6 | 0.0 | 43.4 | 49.3 | 0.0 | 41.5 | 53.8 | 0.0 |
| LnGrp LOS | B | B | | B | B | | D | D | | D | D | |
| Approach Vol, veh/h | | 663 | A | | 514 | A | | 456 | A | | 229 | A |
| Approach Delay, s/veh | | 17.3 | | | 18.5 | | | 46.1 | | | 47.6 | |
| Approach LOS | | B | | | B | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 60.0 | 20.0 | 14.6 | 7.5 | 62.8 | 13.9 | 20.7 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 20.1 | 14.6 | 8.2 | 2.4 | 22.9 | 8.1 | 13.4 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.0 | 0.0 | 0.4 | 0.0 | 3.6 | 0.1 | 0.7 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|------|--|
| HCM 6th Ctrl Delay | | | | | | | | | | | 28.4 | |
| HCM 6th LOS | | | | | | | | | | | C | |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 13 | 15 | 584 | 466 | 5 |
| Future Vol, veh/h | 6 | 13 | 15 | 584 | 466 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 54 | 54 | 86 | 86 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 11 | 24 | 17 | 679 | 568 | 6 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1284 | 571 | 574 | 0 | 0 |
| Stage 1 | 571 | - | - | - | - |
| Stage 2 | 713 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 184 | 524 | 1009 | - | - |
| Stage 1 | 569 | - | - | - | - |
| Stage 2 | 489 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 179 | 524 | 1009 | - | - |
| Mov Cap-2 Maneuver | 179 | - | - | - | - |
| Stage 1 | 554 | - | - | - | - |
| Stage 2 | 489 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.4 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1009 | - | 326 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.108 | - | - |
| HCM Control Delay (s) | 8.6 | 0 | 17.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.4 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | 🚗🚗 | | 🚗 | 🚗 | 🚗 | 🚗 |
| Traffic Vol, veh/h | 40 | 12 | 15 | 547 | 467 | 31 |
| Future Vol, veh/h | 40 | 12 | 15 | 547 | 467 | 31 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | 175 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 56 | 56 | 89 | 89 | 84 | 84 |
| Heavy Vehicles, % | 3 | 3 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 71 | 21 | 17 | 615 | 556 | 37 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1205 | 556 | 593 | 0 | 0 |
| Stage 1 | 556 | - | - | - | - |
| Stage 2 | 649 | - | - | - | - |
| Critical Hdwy | 6.43 | 6.23 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.43 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.43 | - | - | - | - |
| Follow-up Hdwy | 3.527 | 3.327 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 202 | 529 | 993 | - | - |
| Stage 1 | 572 | - | - | - | - |
| Stage 2 | 518 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 199 | 529 | 993 | - | - |
| Mov Cap-2 Maneuver | 199 | - | - | - | - |
| Stage 1 | 562 | - | - | - | - |
| Stage 2 | 518 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 30.5 | 0.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 993 | - | 232 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.4 | - | - |
| HCM Control Delay (s) | 8.7 | - | 30.5 | - | - |
| HCM Lane LOS | A | - | D | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 1.8 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 543 | 41 | 5 | 470 | 37 | 8 |
| Future Vol, veh/h | 543 | 41 | 5 | 470 | 37 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 83 | 83 | 51 | 51 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 631 | 48 | 6 | 566 | 73 | 16 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 679 | 0 |
| Stage 1 | - | - | - | 631 |
| Stage 2 | - | - | - | 578 |
| Critical Hdwy | - | - | 4.1 | 6.4 |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | 3.5 |
| Pot Cap-1 Maneuver | - | - | 923 | 204 |
| Stage 1 | - | - | - | 534 |
| Stage 2 | - | - | - | 565 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 923 | 202 |
| Mov Cap-2 Maneuver | - | - | - | 202 |
| Stage 1 | - | - | - | 534 |
| Stage 2 | - | - | - | 560 |

| Approach | EB | WB | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0 | 0.1 | 31 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 225 | - | - | 923 | - |
| HCM Lane V/C Ratio | 0.392 | - | - | 0.007 | - |
| HCM Control Delay (s) | 31 | - | - | 8.9 | 0 |
| HCM Lane LOS | D | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.8 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 18 | 61 | 10 | 714 | 527 | 10 |
| Future Vol, veh/h | 18 | 61 | 10 | 714 | 527 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 84 | 84 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 20 | 67 | 12 | 850 | 573 | 11 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1453 | 579 | 584 | 0 | 0 |
| Stage 1 | 579 | - | - | - | - |
| Stage 2 | 874 | - | - | - | - |
| Critical Hdwy | 6.5 | 6.3 | 4.11 | - | - |
| Critical Hdwy Stg 1 | 5.5 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.5 | - | - | - | - |
| Follow-up Hdwy | 3.59 | 3.39 | 2.209 | - | - |
| Pot Cap-1 Maneuver | 138 | 500 | 996 | - | - |
| Stage 1 | 545 | - | - | - | - |
| Stage 2 | 395 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 135 | 500 | 996 | - | - |
| Mov Cap-2 Maneuver | 135 | - | - | - | - |
| Stage 1 | 532 | - | - | - | - |
| Stage 2 | 395 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 996 | - | 309 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.281 | - | - |
| HCM Control Delay (s) | 8.7 | 0 | 21.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.1 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 37 | 669 | 40 | 25 | 513 |
| Future Vol, veh/h | 17 | 37 | 669 | 40 | 25 | 513 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | 235 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 71 | 71 | 88 | 88 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 6 | 6 | 6 | 6 |
| Mvmt Flow | 24 | 52 | 760 | 45 | 27 | 564 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1378 | 760 | 0 | 0 | 805 |
| Stage 1 | 760 | - | - | - | - |
| Stage 2 | 618 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.16 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.254 |
| Pot Cap-1 Maneuver | 161 | 409 | - | - | 802 |
| Stage 1 | 465 | - | - | - | - |
| Stage 2 | 542 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 156 | 409 | - | - | 802 |
| Mov Cap-2 Maneuver | 156 | - | - | - | - |
| Stage 1 | 465 | - | - | - | - |
| Stage 2 | 524 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 20.5 | 0 | 0.4 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 156 | 409 | 802 | - |
| HCM Lane V/C Ratio | - | - | 0.153 | 0.127 | 0.034 | - |
| HCM Control Delay (s) | - | - | 32.2 | 15.1 | 9.6 | - |
| HCM Lane LOS | - | - | D | C | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.4 | 0.1 | - |

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020

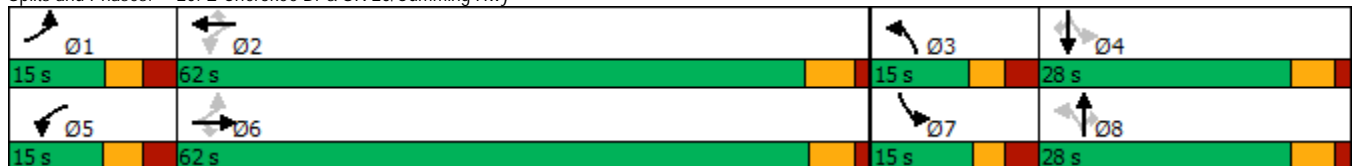


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Future Volume (vph) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 | 62.0 | 15.0 | 62.0 | 62.0 | 15.0 | 28.0 | 28.0 | 15.0 | 28.0 | 28.0 |
| Total Split (%) | 12.5% | 51.7% | 51.7% | 12.5% | 51.7% | 51.7% | 12.5% | 23.3% | 23.3% | 12.5% | 23.3% | 23.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 63.7 | 56.5 | 56.5 | 65.5 | 59.5 | 59.5 | 30.6 | 22.4 | 22.4 | 31.0 | 22.4 | 22.4 |
| Actuated g/C Ratio | 0.53 | 0.47 | 0.47 | 0.55 | 0.50 | 0.50 | 0.26 | 0.19 | 0.19 | 0.26 | 0.19 | 0.19 |
| v/c Ratio | 0.16 | 0.35 | 0.18 | 0.46 | 0.34 | 0.16 | 0.92 | 0.77 | 0.44 | 0.97 | 0.69 | 0.21 |
| Control Delay | 11.8 | 20.7 | 3.4 | 16.2 | 19.6 | 3.2 | 78.3 | 62.3 | 8.8 | 90.1 | 57.0 | 2.2 |
| 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 | 11.8 | 20.7 | 3.4 | 16.2 | 19.6 | 3.2 | 78.3 | 62.3 | 8.8 | 90.1 | 57.0 | 2.2 |
| LOS | B | C | A | B | B | A | E | E | A | F | E | A |
| Approach Delay | | 17.7 | | | 17.1 | | | 51.8 | | | 61.4 | |
| Approach LOS | | B | | | B | | | D | | | E | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.97 | |
| Intersection Signal Delay: 31.7 | Intersection LOS: C |
| Intersection Capacity Utilization 65.5% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Future Volume (veh/h) | 56 | 780 | 138 | 150 | 755 | 123 | 196 | 233 | 178 | 183 | 202 | 73 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1811 | 1811 | 1811 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 59 | 821 | 0 | 165 | 830 | 0 | 231 | 274 | 209 | 220 | 243 | 88 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.85 | 0.85 | 0.85 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 1 | 1 | 1 |
| Cap, veh/h | 403 | 2348 | | 411 | 2382 | | 263 | 355 | 301 | 240 | 352 | 298 |
| Arrive On Green | 0.06 | 0.47 | 0.00 | 0.07 | 0.48 | 0.00 | 0.07 | 0.19 | 0.19 | 0.08 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1739 | 4985 | 1547 | 1725 | 4944 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 59 | 821 | 0 | 165 | 830 | 0 | 231 | 274 | 209 | 220 | 243 | 88 |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1662 | 1547 | 1725 | 1648 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 2.0 | 12.5 | 0.0 | 5.9 | 12.5 | 0.0 | 8.8 | 16.4 | 14.6 | 9.0 | 14.4 | 5.7 |
| Cycle Q Clear(g_c), s | 2.0 | 12.5 | 0.0 | 5.9 | 12.5 | 0.0 | 8.8 | 16.4 | 14.6 | 9.0 | 14.4 | 5.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 403 | 2348 | | 411 | 2382 | | 263 | 355 | 301 | 240 | 352 | 298 |
| V/C Ratio(X) | 0.15 | 0.35 | | 0.40 | 0.35 | | 0.88 | 0.77 | 0.70 | 0.92 | 0.69 | 0.30 |
| Avail Cap(c_a), veh/h | 428 | 2348 | | 417 | 2382 | | 263 | 355 | 301 | 240 | 352 | 298 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.4 | 20.1 | 0.0 | 15.1 | 19.4 | 0.0 | 43.4 | 46.4 | 45.6 | 42.9 | 45.5 | 42.0 |
| Incr Delay (d2), s/veh | 0.2 | 0.4 | 0.0 | 0.6 | 0.4 | 0.0 | 26.5 | 15.0 | 12.5 | 36.0 | 10.6 | 2.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.8 | 4.7 | 0.0 | 2.2 | 4.6 | 0.0 | 4.4 | 9.0 | 6.7 | 4.5 | 7.6 | 2.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 14.6 | 20.5 | 0.0 | 15.7 | 19.8 | 0.0 | 69.9 | 61.4 | 58.1 | 78.9 | 56.1 | 44.5 |
| LnGrp LOS | B | C | | B | B | | E | E | E | E | E | D |
| Approach Vol, veh/h | | 880 | A | | 995 | A | | 714 | | | 551 | |
| Approach Delay, s/veh | | 20.1 | | | 19.1 | | | 63.2 | | | 63.4 | |
| Approach LOS | | C | | | B | | | E | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.3 | 63.7 | 15.0 | 28.0 | 14.6 | 62.4 | 15.0 | 28.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 8.6 | 56.1 | * 8.8 | * 22 | 8.4 | * 57 | 9.0 | * 22 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.0 | 14.5 | 10.8 | 16.4 | 7.9 | 14.5 | 11.0 | 18.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.1 | 0.0 | 0.8 | 0.0 | 6.1 | 0.0 | 0.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 37.2 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | T | T | L | L | TR | L | T |
| Maximum Queue (ft) | 364 | 952 | 940 | 940 | 194 | 368 | 368 | 150 | 174 | 647 | 42 | 26 |
| Average Queue (ft) | 93 | 790 | 754 | 283 | 117 | 192 | 204 | 148 | 173 | 625 | 6 | 6 |
| 95th Queue (ft) | 352 | 1040 | 1029 | 905 | 218 | 341 | 339 | 151 | 178 | 636 | 23 | 20 |
| Link Distance (ft) | | 925 | 925 | 925 | | 396 | 396 | | | 608 | | 132 |
| Upstream Blk Time (%) | | 25 | 14 | 6 | | | | | | 56 | | |
| Queuing Penalty (veh) | | 0 | 0 | 0 | | | | | | 0 | | |
| Storage Bay Dist (ft) | 315 | | | | 145 | | | 125 | 125 | | 135 | |
| Storage Blk Time (%) | | 91 | | | 7 | 14 | 1 | 40 | 62 | | | |
| Queuing Penalty (veh) | | 18 | | | 29 | 20 | 0 | 76 | 120 | | | |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | SB |
|-----------------------|-----|
| Directions Served | R |
| Maximum Queue (ft) | 44 |
| Average Queue (ft) | 12 |
| 95th Queue (ft) | 29 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 135 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | B69 | B69 | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | T | | LR |
| Maximum Queue (ft) | 31 | 499 | 423 | 28 |
| Average Queue (ft) | 16 | 119 | 44 | 16 |
| 95th Queue (ft) | 41 | 432 | 254 | 38 |
| Link Distance (ft) | | 396 | 396 | 336 |
| Upstream Blk Time (%) | | 2 | 1 | |
| Queuing Penalty (veh) | | 9 | 3 | |
| Storage Bay Dist (ft) | 235 | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|----|
| Directions Served | L | L | LTR | LT | R |
| Maximum Queue (ft) | 72 | 20 | 22 | 48 | 84 |
| Average Queue (ft) | 20 | 2 | 4 | 8 | 22 |
| 95th Queue (ft) | 51 | 12 | 17 | 29 | 54 |
| Link Distance (ft) | | | 511 | 805 | |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | | 75 |
| Storage Blk Time (%) | | | | | 1 |
| Queuing Penalty (veh) | | | | | 0 |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 96 | 22 | 87 | 63 |
| Average Queue (ft) | 28 | 1 | 35 | 20 |
| 95th Queue (ft) | 64 | 8 | 70 | 47 |
| Link Distance (ft) | | | 636 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | 135 |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 15 | 46 | 59 | 48 |
| Average Queue (ft) | 3 | 12 | 18 | 10 |
| 95th Queue (ft) | 12 | 36 | 45 | 32 |
| Link Distance (ft) | | | 532 | 436 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 51 | 22 | 64 | 65 |
| Average Queue (ft) | 21 | 2 | 16 | 17 |
| 95th Queue (ft) | 44 | 11 | 46 | 36 |
| Link Distance (ft) | | | 272 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 150 | | 85 |
| Storage Blk Time (%) | | | | 0 |
| Queuing Penalty (veh) | | | | 0 |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 139 | 43 |
| Average Queue (ft) | 9 | 13 |
| 95th Queue (ft) | 61 | 34 |
| Link Distance (ft) | 2496 | 594 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB | SB |
|-----------------------|-----|-----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 75 | 54 | 91 |
| Average Queue (ft) | 16 | 23 | 31 |
| 95th Queue (ft) | 48 | 49 | 61 |
| Link Distance (ft) | | 464 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 40 | 25 | 22 | 51 |
| Average Queue (ft) | 13 | 2 | 7 | 24 |
| 95th Queue (ft) | 31 | 14 | 24 | 46 |
| Link Distance (ft) | | | 630 | 204 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | TR | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 385 | 956 | 350 | 692 | 400 | 225 | 910 | 420 | 169 | 976 | 525 |
| Average Queue (ft) | 356 | 786 | 303 | 653 | 142 | 153 | 403 | 215 | 98 | 464 | 283 |
| 95th Queue (ft) | 474 | 1121 | 419 | 799 | 457 | 279 | 721 | 432 | 194 | 777 | 546 |
| Link Distance (ft) | | 904 | | 677 | | | 2410 | | | 1376 | |
| Upstream Blk Time (%) | | 42 | | 34 | | | | | | | |
| Queuing Penalty (veh) | | 0 | | 0 | | | | | | | |
| Storage Bay Dist (ft) | 335 | | 300 | | 350 | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 46 | 30 | 3 | 41 | | 8 | 45 | 4 | 2 | 62 | |
| Queuing Penalty (veh) | 251 | 82 | 29 | 184 | | 56 | 184 | 19 | 13 | 238 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | EB | NB |
|-----------------------|-----|-----|-----|
| Directions Served | L | R | L |
| Maximum Queue (ft) | 97 | 41 | 74 |
| Average Queue (ft) | 25 | 1 | 25 |
| 95th Queue (ft) | 62 | 14 | 58 |
| Link Distance (ft) | 350 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 100 | 160 |
| Storage Blk Time (%) | 0 | | |
| Queuing Penalty (veh) | 0 | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | L | LR |
| Maximum Queue (ft) | 54 | 44 |
| Average Queue (ft) | 18 | 20 |
| 95th Queue (ft) | 45 | 37 |
| Link Distance (ft) | | 759 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | EB | WB | SB |
|-----------------------|-----|-----|-----|------|
| Directions Served | LT | R | LTR | LT |
| Maximum Queue (ft) | 145 | 9 | 65 | 20 |
| Average Queue (ft) | 59 | 1 | 21 | 1 |
| 95th Queue (ft) | 109 | 4 | 52 | 7 |
| Link Distance (ft) | 599 | | 581 | 3756 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 175 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | T | L | T |
| Maximum Queue (ft) | 73 | 354 | 225 | 31 | 232 | 205 | 222 | 118 | 140 |
| Average Queue (ft) | 38 | 132 | 8 | 6 | 136 | 123 | 126 | 65 | 64 |
| 95th Queue (ft) | 69 | 257 | 77 | 27 | 222 | 190 | 207 | 108 | 121 |
| Link Distance (ft) | | 3756 | | | 1100 | | 626 | | 702 |
| Upstream Blk Time (%) | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 185 | | 190 | |
| Storage Blk Time (%) | | 3 | | | 2 | 2 | 1 | | |
| Queuing Penalty (veh) | | 4 | | | 2 | 5 | 4 | | |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 31 | 135 |
| Average Queue (ft) | 11 | 16 |
| 95th Queue (ft) | 35 | 67 |
| Link Distance (ft) | 396 | 950 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 96 | 30 |
| Average Queue (ft) | 30 | 4 |
| 95th Queue (ft) | 65 | 20 |
| Link Distance (ft) | 611 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 235 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 75 | 72 |
| Average Queue (ft) | 7 | 30 |
| 95th Queue (ft) | 38 | 57 |
| Link Distance (ft) | 784 | 510 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 90 | 74 |
| Average Queue (ft) | 40 | 5 |
| 95th Queue (ft) | 73 | 33 |
| Link Distance (ft) | 663 | 489 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | L | L |
| Maximum Queue (ft) | 41 | 28 |
| Average Queue (ft) | 10 | 12 |
| 95th Queue (ft) | 28 | 34 |
| Link Distance (ft) | 478 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 235 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|
| Directions Served | L | T | T | T | L | T | T | T | L | T | R | L |
| Maximum Queue (ft) | 111 | 309 | 250 | 169 | 111 | 180 | 178 | 199 | 279 | 337 | 56 | 205 |
| Average Queue (ft) | 30 | 159 | 121 | 45 | 65 | 122 | 109 | 50 | 145 | 163 | 39 | 111 |
| 95th Queue (ft) | 73 | 254 | 225 | 133 | 117 | 184 | 184 | 141 | 242 | 289 | 59 | 191 |
| Link Distance (ft) | | 714 | 714 | 714 | | 1292 | 1292 | 1292 | | 592 | | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | 500 | | | | 230 | | 550 | 220 |
| Storage Blk Time (%) | | 1 | | | | | | | 1 | 3 | | 0 |
| Queuing Penalty (veh) | | 1 | | | | | | | 6 | 11 | | 0 |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | SB | SB |
|-----------------------|-----|----|
| Directions Served | T | R |
| Maximum Queue (ft) | 181 | 50 |
| Average Queue (ft) | 117 | 22 |
| 95th Queue (ft) | 179 | 44 |
| Link Distance (ft) | 762 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 220 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 1364 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

09/24/2020

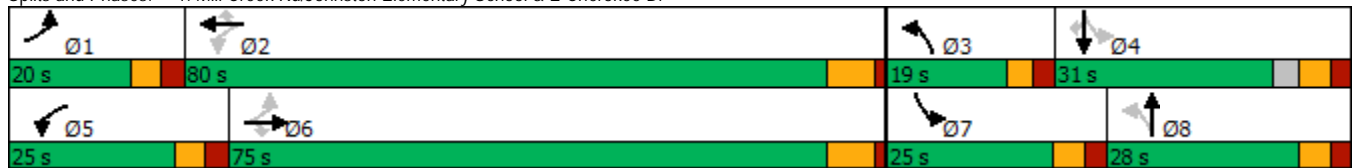


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 20.0 | 75.0 | 75.0 | 25.0 | 80.0 | 80.0 | 19.0 | 28.0 | 25.0 | 31.0 | 31.0 |
| Total Split (%) | 13.1% | 49.0% | 49.0% | 16.3% | 52.3% | 52.3% | 12.4% | 18.3% | 16.3% | 20.3% | 20.3% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effct Green (s) | 78.8 | 67.2 | 67.2 | 90.3 | 73.1 | 73.1 | 36.0 | 21.8 | 46.6 | 27.8 | 27.8 |
| Actuated g/C Ratio | 0.52 | 0.45 | 0.45 | 0.60 | 0.49 | 0.49 | 0.24 | 0.15 | 0.31 | 0.19 | 0.19 |
| v/c Ratio | 0.67 | 0.55 | 0.59 | 0.63 | 1.07 | 0.12 | 0.81 | 0.57 | 0.32 | 0.44 | 0.42 |
| Control Delay | 48.8 | 33.8 | 5.9 | 20.4 | 86.3 | 3.7 | 65.2 | 60.4 | 41.4 | 59.6 | 10.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 48.8 | 33.8 | 5.9 | 20.4 | 86.3 | 3.7 | 65.2 | 60.4 | 41.4 | 59.6 | 10.0 |
| LOS | D | C | A | C | F | A | E | E | D | E | B |
| Approach Delay | | 21.1 | | | 65.4 | | | 63.5 | | 34.5 | |
| Approach LOS | | C | | | E | | | E | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 153 | |
| Actuated Cycle Length: 150.1 | |
| Natural Cycle: 140 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.07 | |
| Intersection Signal Delay: 46.1 | Intersection LOS: D |
| Intersection Capacity Utilization 88.4% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

09/24/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 430 | 562 | 256 | 803 | 85 | 242 | 75 | 61 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 141 | 822 | 696 | 382 | 931 | 789 | 332 | 273 | | 410 | 346 | 293 |
| Arrive On Green | 0.05 | 0.44 | 0.44 | 0.11 | 0.50 | 0.50 | 0.09 | 0.15 | 0.00 | 0.13 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 453 | 592 | 308 | 967 | 102 | 272 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1856 | 1572 | 1781 | 1870 | 1585 | 1753 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 5.6 | 26.4 | 49.4 | 13.4 | 73.1 | 5.1 | 13.5 | 6.0 | 0.0 | 7.1 | 10.5 | 15.9 |
| Cycle Q Clear(g_c), s | 5.6 | 26.4 | 49.4 | 13.4 | 73.1 | 5.1 | 13.5 | 6.0 | 0.0 | 7.1 | 10.5 | 15.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 141 | 822 | 696 | 382 | 931 | 789 | 332 | 273 | | 410 | 346 | 293 |
| V/C Ratio(X) | 0.84 | 0.55 | 0.85 | 0.81 | 1.04 | 0.13 | 0.82 | 0.31 | | 0.27 | 0.43 | 0.62 |
| Avail Cap(c_a), veh/h | 215 | 860 | 729 | 419 | 931 | 789 | 332 | 273 | | 410 | 346 | 293 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.6 | 30.2 | 36.6 | 23.3 | 36.9 | 19.8 | 52.7 | 55.8 | 0.0 | 39.9 | 52.5 | 54.7 |
| Incr Delay (d2), s/veh | 15.6 | 0.7 | 9.1 | 10.3 | 40.0 | 0.1 | 14.9 | 2.9 | 0.0 | 1.6 | 3.8 | 9.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 12.0 | 20.4 | 6.6 | 43.0 | 1.9 | 4.6 | 3.0 | 0.0 | 3.3 | 5.3 | 7.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 52.3 | 30.8 | 45.7 | 33.6 | 76.9 | 19.9 | 67.6 | 58.7 | 0.0 | 41.5 | 56.4 | 64.2 |
| LnGrp LOS | D | C | D | C | F | B | E | E | | D | E | E |
| Approach Vol, veh/h | | 1163 | | | 1377 | | | 356 | A | | 440 | |
| Approach Delay, s/veh | | 40.6 | | | 63.0 | | | 65.5 | | | 55.9 | |
| Approach LOS | | D | | | E | | | E | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.9 | 80.0 | 19.0 | 34.0 | 21.9 | 71.9 | 25.0 | 28.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 14 | 73.1 | 13.5 | * 25 | * 19 | 68.1 | * 19 | * 22 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.6 | 75.1 | 15.5 | 17.9 | 15.4 | 51.4 | 9.1 | 8.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 0.8 | 0.3 | 5.0 | 0.2 | 0.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 54.5 |
| HCM 6th LOS | D |

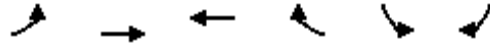
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 22 | 573 | 685 | 45 | 188 | 56 |
| Future Volume (vph) | 22 | 573 | 685 | 45 | 188 | 56 |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 60.0 | 60.0 | 60.0 | 60.0 | 30.0 | 30.0 |
| Total Split (%) | 66.7% | 66.7% | 66.7% | 66.7% | 33.3% | 33.3% |
| 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? | | | | | | |
| Recall Mode | None | None | None | None | Min | Min |
| Act Effect Green (s) | 28.8 | 28.8 | 28.8 | 28.8 | 13.0 | 13.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | 0.52 | 0.52 | 0.24 | 0.24 |
| v/c Ratio | 0.11 | 0.64 | 0.77 | 0.06 | 0.52 | 0.15 |
| Control Delay | 8.3 | 12.8 | 16.4 | 2.4 | 26.0 | 7.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 8.3 | 12.8 | 16.4 | 2.4 | 26.0 | 7.7 |
| LOS | A | B | B | A | C | A |
| Approach Delay | | 12.6 | 15.6 | | 21.8 | |
| Approach LOS | | B | B | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 90 | |
| Actuated Cycle Length: 54.9 | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.77 | |
| Intersection Signal Delay: 15.5 | Intersection LOS: B |
| Intersection Capacity Utilization 56.5% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 4: E Cherokee Dr & Ranchwood Trail



HCM 6th Signalized Intersection Summary

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 573 | 685 | 45 | 188 | 56 |
| Future Volume (veh/h) | 22 | 573 | 685 | 45 | 188 | 56 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | No | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1885 | 1885 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 23 | 610 | 761 | 50 | 216 | 64 |
| Peak Hour Factor | 0.94 | 0.94 | 0.90 | 0.90 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Cap, veh/h | 307 | 949 | 980 | 830 | 322 | 287 |
| Arrive On Green | 0.52 | 0.52 | 0.52 | 0.52 | 0.18 | 0.18 |
| Sat Flow, veh/h | 657 | 1826 | 1885 | 1598 | 1767 | 1572 |
| Grp Volume(v), veh/h | 23 | 610 | 761 | 50 | 216 | 64 |
| Grp Sat Flow(s),veh/h/ln | 657 | 1826 | 1885 | 1598 | 1767 | 1572 |
| Q Serve(g_s), s | 1.2 | 9.7 | 13.1 | 0.6 | 4.6 | 1.4 |
| Cycle Q Clear(g_c), s | 14.3 | 9.7 | 13.1 | 0.6 | 4.6 | 1.4 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 307 | 949 | 980 | 830 | 322 | 287 |
| V/C Ratio(X) | 0.08 | 0.64 | 0.78 | 0.06 | 0.67 | 0.22 |
| Avail Cap(c_a), veh/h | 846 | 2448 | 2527 | 2142 | 1053 | 937 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 13.5 | 7.0 | 7.8 | 4.8 | 15.3 | 14.0 |
| Incr Delay (d2), s/veh | 0.1 | 0.7 | 1.4 | 0.0 | 2.4 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.1 | 1.9 | 2.7 | 0.1 | 1.8 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 13.6 | 7.7 | 9.2 | 4.8 | 17.8 | 14.4 |
| LnGrp LOS | B | A | A | A | B | B |
| Approach Vol, veh/h | | 633 | 811 | | 280 | |
| Approach Delay, s/veh | | 7.9 | 8.9 | | 17.0 | |
| Approach LOS | | A | A | | B | |
| Timer - Assigned Phs | | | | 4 | 6 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 26.9 | 13.3 | 26.9 |
| Change Period (Y+Rc), s | | | | 6.0 | 6.0 | 6.0 |
| Max Green Setting (Gmax), s | | | | 54.0 | 24.0 | 54.0 |
| Max Q Clear Time (g_c+I1), s | | | | 16.3 | 6.6 | 15.1 |
| Green Ext Time (p_c), s | | | | 4.3 | 0.8 | 5.8 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 9.8 | | | |
| HCM 6th LOS | | | A | | | |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 406 | 190 | 195 | 735 | 565 | 174 | 392 | 140 | 163 | 143 |
| Average Queue (ft) | 83 | 229 | 107 | 140 | 719 | 215 | 155 | 202 | 38 | 70 | 54 |
| 95th Queue (ft) | 184 | 356 | 179 | 222 | 762 | 646 | 204 | 377 | 72 | 136 | 123 |
| Link Distance (ft) | | 929 | 929 | | 720 | | | 620 | | 144 | |
| Upstream Blk Time (%) | | | | | 23 | | | | 0 | 2 | 0 |
| Queuing Penalty (veh) | | | | | 268 | | | | 0 | 0 | 0 |
| Storage Bay Dist (ft) | 315 | | | 145 | | 340 | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 3 | | 11 | 46 | | 31 | 5 | 0 | 2 | 0 |
| Queuing Penalty (veh) | | 3 | | 97 | 158 | | 42 | 12 | 0 | 4 | 0 |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | EB | WB | WB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | R |
| Maximum Queue (ft) | 51 | 219 | 239 | 267 | 242 | 185 |
| Average Queue (ft) | 15 | 95 | 117 | 22 | 80 | 26 |
| 95th Queue (ft) | 41 | 197 | 209 | 103 | 160 | 102 |
| Link Distance (ft) | | 3832 | 566 | | 636 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 235 | | | 175 | | 135 |
| Storage Blk Time (%) | | 0 | 1 | | 2 | |
| Queuing Penalty (veh) | | 0 | 1 | | 1 | |

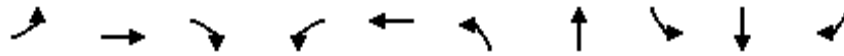
Zone Summary

Zone wide Queuing Penalty: 586

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

09/24/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 963 | 440 | 138 | 881 | 584 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 4.8 | 4.8 | 4.8 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 11.0 | 11.0 | 11.0 |
| Total Split (s) | 15.0 | 92.0 | 92.0 | 15.0 | 92.0 | 53.0 | 51.0 | 22.0 | 20.0 | 20.0 |
| Total Split (%) | 8.3% | 51.1% | 51.1% | 8.3% | 51.1% | 29.4% | 28.3% | 12.2% | 11.1% | 11.1% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 92.3 | 85.1 | 85.1 | 98.2 | 92.2 | 67.5 | 44.8 | 29.6 | 13.8 | 13.8 |
| Actuated g/C Ratio | 0.51 | 0.47 | 0.47 | 0.55 | 0.51 | 0.38 | 0.25 | 0.16 | 0.08 | 0.08 |
| v/c Ratio | 0.20 | 1.14 | 0.54 | 1.29 | 1.09 | 1.09 | 0.38 | 0.06 | 0.10 | 0.09 |
| Control Delay | 22.3 | 119.5 | 21.2 | 213.0 | 96.0 | 112.3 | 9.2 | 40.6 | 79.1 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.3 | 119.5 | 21.2 | 213.0 | 96.0 | 112.3 | 9.2 | 40.6 | 79.1 | 0.8 |
| LOS | C | F | C | F | F | F | A | D | E | A |
| Approach Delay | | 87.7 | | | 111.8 | | 86.7 | | 34.1 | |
| Approach LOS | | F | | | F | | F | | C | |

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Natural Cycle: 180

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.29

Intersection Signal Delay: 94.7

Intersection LOS: F

Intersection Capacity Utilization 113.4%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| | | | |
|------|------|------|------|
| Ø1 | Ø2 | Ø3 | Ø4 |
| 15 s | 92 s | 53 s | 20 s |
| Ø5 | Ø6 | Ø7 | Ø8 |
| 15 s | 92 s | 22 s | 51 s |

HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

09/24/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 963 | 440 | 138 | 881 | 0 | 584 | 7 | 186 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 72 | 891 | 755 | 127 | 942 | 798 | 610 | 469 | | 308 | 146 | 123 |
| Arrive On Green | 0.02 | 0.47 | 0.47 | 0.05 | 0.50 | 0.00 | 0.26 | 0.25 | 0.00 | 0.09 | 0.08 | 0.08 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 1014 | 463 | 162 | 1036 | 0 | 635 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 | 1795 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 1.1 | 85.1 | 38.7 | 8.8 | 90.6 | 0.0 | 47.5 | 0.6 | 0.0 | 1.3 | 1.2 | 2.3 |
| Cycle Q Clear(g_c), s | 1.1 | 85.1 | 38.7 | 8.8 | 90.6 | 0.0 | 47.5 | 0.6 | 0.0 | 1.3 | 1.2 | 2.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 72 | 891 | 755 | 127 | 942 | 798 | 610 | 469 | | 308 | 146 | 123 |
| V/C Ratio(X) | 0.29 | 1.14 | 0.61 | 1.27 | 1.10 | 0.00 | 1.04 | 0.02 | | 0.05 | 0.10 | 0.18 |
| Avail Cap(c_a), veh/h | 128 | 891 | 755 | 127 | 942 | 798 | 610 | 469 | | 308 | 146 | 123 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.7 | 47.5 | 35.2 | 57.5 | 44.7 | 0.0 | 58.3 | 51.0 | 0.0 | 63.4 | 77.3 | 77.8 |
| Incr Delay (d2), s/veh | 2.2 | 75.6 | 1.5 | 171.1 | 60.6 | 0.0 | 47.3 | 0.1 | 0.0 | 0.3 | 1.3 | 3.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 58.4 | 15.5 | 12.0 | 57.5 | 0.0 | 13.0 | 0.3 | 0.0 | 0.7 | 0.7 | 1.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 45.9 | 123.1 | 36.7 | 228.7 | 105.2 | 0.0 | 105.6 | 51.1 | 0.0 | 63.7 | 78.6 | 80.9 |
| LnGrp LOS | D | F | D | F | F | A | F | D | | E | E | F |
| Approach Vol, veh/h | 1498 | | | 1198 | | | 643 | | | 52 | | |
| Approach Delay, s/veh | 95.3 | | | 121.9 | | | 105.0 | | | 75.0 | | |
| Approach LOS | F | | | F | | | F | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.5 | 97.5 | 53.0 | 20.0 | 15.0 | 92.0 | 22.0 | 51.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 85.1 | 47.5 | * 14 | * 8.8 | 85.1 | * 16 | * 45 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.1 | 92.6 | 49.5 | 4.3 | 10.8 | 87.1 | 3.3 | 2.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|--------------------|-------|
| HCM 6th Ctrl Delay | 106.2 |
| HCM 6th LOS | F |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings

4: E Cherokee Dr & Ranchwood Trail

09/24/2020

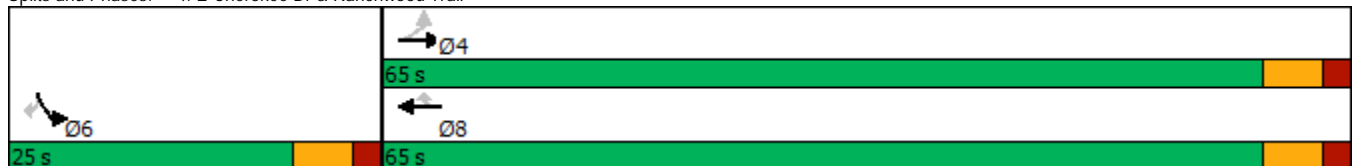


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 90 | 712 | 789 | 111 | 59 | 42 |
| Future Volume (vph) | 90 | 712 | 789 | 111 | 59 | 42 |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 65.0 | 65.0 | 65.0 | 65.0 | 25.0 | 25.0 |
| Total Split (%) | 72.2% | 72.2% | 72.2% | 72.2% | 27.8% | 27.8% |
| 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? | | | | | | |
| Recall Mode | None | None | None | None | Min | Min |
| Act Effect Green (s) | 29.3 | 29.3 | 29.3 | 29.3 | 8.2 | 8.2 |
| Actuated g/C Ratio | 0.58 | 0.58 | 0.58 | 0.58 | 0.16 | 0.16 |
| v/c Ratio | 0.42 | 0.68 | 0.79 | 0.12 | 0.26 | 0.17 |
| Control Delay | 12.0 | 10.6 | 14.0 | 1.3 | 24.8 | 10.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.0 | 10.6 | 14.0 | 1.3 | 24.8 | 10.1 |
| LOS | B | B | B | A | C | B |
| Approach Delay | | 10.8 | 12.4 | | 18.7 | |
| Approach LOS | | B | B | | B | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 90 | |
| Actuated Cycle Length: 50.3 | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.79 | |
| Intersection Signal Delay: 12.1 | Intersection LOS: B |
| Intersection Capacity Utilization 65.7% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 4: E Cherokee Dr & Ranchwood Trail



HCM 6th Signalized Intersection Summary

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 90 | 712 | 789 | 111 | 59 | 42 |
| Future Volume (veh/h) | 90 | 712 | 789 | 111 | 59 | 42 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | No | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1856 | 1856 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 95 | 749 | 848 | 119 | 72 | 51 |
| Peak Hour Factor | 0.95 | 0.95 | 0.93 | 0.93 | 0.82 | 0.82 |
| Percent Heavy Veh, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Cap, veh/h | 344 | 1191 | 1172 | 993 | 188 | 168 |
| Arrive On Green | 0.63 | 0.63 | 0.63 | 0.63 | 0.11 | 0.11 |
| Sat Flow, veh/h | 586 | 1885 | 1856 | 1572 | 1739 | 1547 |
| Grp Volume(v), veh/h | 95 | 749 | 848 | 119 | 72 | 51 |
| Grp Sat Flow(s),veh/h/ln | 586 | 1885 | 1856 | 1572 | 1739 | 1547 |
| Q Serve(g_s), s | 6.1 | 11.2 | 14.3 | 1.4 | 1.8 | 1.4 |
| Cycle Q Clear(g_c), s | 20.4 | 11.2 | 14.3 | 1.4 | 1.8 | 1.4 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 344 | 1191 | 1172 | 993 | 188 | 168 |
| V/C Ratio(X) | 0.28 | 0.63 | 0.72 | 0.12 | 0.38 | 0.30 |
| Avail Cap(c_a), veh/h | 723 | 2409 | 2371 | 2010 | 716 | 637 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.7 | 5.2 | 5.8 | 3.4 | 19.1 | 19.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.6 | 0.9 | 0.1 | 1.3 | 1.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 1.6 | 2.1 | 0.2 | 0.7 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 13.1 | 5.7 | 6.6 | 3.4 | 20.4 | 20.0 |
| LnGrp LOS | B | A | A | A | C | B |
| Approach Vol, veh/h | | 844 | 967 | | 123 | |
| Approach Delay, s/veh | | 6.6 | 6.2 | | 20.2 | |
| Approach LOS | | A | A | | C | |
| Timer - Assigned Phs | | | | 4 | 6 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 35.2 | 11.0 | 35.2 |
| Change Period (Y+Rc), s | | | | 6.0 | 6.0 | 6.0 |
| Max Green Setting (Gmax), s | | | | 59.0 | 19.0 | 59.0 |
| Max Q Clear Time (g_c+I1), s | | | | 22.4 | 3.8 | 16.3 |
| Green Ext Time (p_c), s | | | | 6.8 | 0.3 | 7.4 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 7.3 | | | |
| HCM 6th LOS | | | A | | | |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | L | TR | L | T | R |
| Maximum Queue (ft) | 364 | 945 | 944 | 194 | 734 | 174 | 659 | 63 | 42 | 40 |
| Average Queue (ft) | 32 | 944 | 933 | 145 | 590 | 173 | 638 | 11 | 7 | 11 |
| 95th Queue (ft) | 185 | 944 | 1006 | 232 | 912 | 178 | 651 | 37 | 27 | 32 |
| Link Distance (ft) | | 929 | 929 | | 720 | | 620 | | 144 | |
| Upstream Blk Time (%) | | 72 | 33 | | 10 | | 64 | | | |
| Queuing Penalty (veh) | | 0 | 0 | | 98 | | 0 | | | |
| Storage Bay Dist (ft) | 315 | | | 145 | | 125 | | 135 | | 135 |
| Storage Blk Time (%) | | 54 | | 13 | 33 | 64 | | | | |
| Queuing Penalty (veh) | | 11 | | 118 | 45 | 124 | | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | EB | WB | WB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | R |
| Maximum Queue (ft) | 74 | 182 | 164 | 56 | 48 | 40 |
| Average Queue (ft) | 40 | 82 | 84 | 22 | 24 | 15 |
| 95th Queue (ft) | 72 | 133 | 151 | 50 | 47 | 35 |
| Link Distance (ft) | | 3832 | 566 | | 636 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 235 | | | 175 | | 135 |
| Storage Blk Time (%) | | | 0 | | | |
| Queuing Penalty (veh) | | | 0 | | | |

Zone Summary

| |
|--------------------------------|
| Zone wide Queuing Penalty: 395 |
|--------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 66 | 89 | 109 |
| Future Volume (vph) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 66 | 89 | 109 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 27.4 | 11.0 | 24.2 | 24.2 | 24.2 | 24.2 |
| Total Split (s) | 18.0 | 68.0 | 68.0 | 30.0 | 80.0 | 80.0 | 16.0 | 27.0 | 25.0 | 36.0 | 36.0 |
| Total Split (%) | 12.0% | 45.3% | 45.3% | 20.0% | 53.3% | 53.3% | 10.7% | 18.0% | 16.7% | 24.0% | 24.0% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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 |
| Total Lost Time (s) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 50.1 | 39.9 | 39.9 | 66.8 | 50.3 | 50.3 | 32.1 | 21.1 | 46.4 | 30.4 | 30.4 |
| Actuated g/C Ratio | 0.40 | 0.32 | 0.32 | 0.53 | 0.40 | 0.40 | 0.26 | 0.17 | 0.37 | 0.24 | 0.24 |
| v/c Ratio | 0.56 | 0.47 | 0.82 | 0.72 | 0.79 | 0.14 | 0.46 | 0.54 | 0.26 | 0.34 | 0.36 |
| Control Delay | 27.8 | 35.5 | 19.4 | 25.6 | 37.3 | 0.9 | 34.1 | 49.9 | 32.3 | 45.4 | 8.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 27.8 | 35.5 | 19.4 | 25.6 | 37.3 | 0.9 | 34.1 | 49.9 | 32.3 | 45.4 | 8.5 |
| LOS | C | D | B | C | D | A | C | D | C | D | A |
| Approach Delay | | 26.5 | | | 32.3 | | | 39.5 | | 26.9 | |
| Approach LOS | | C | | | C | | | D | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 125.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 30.6

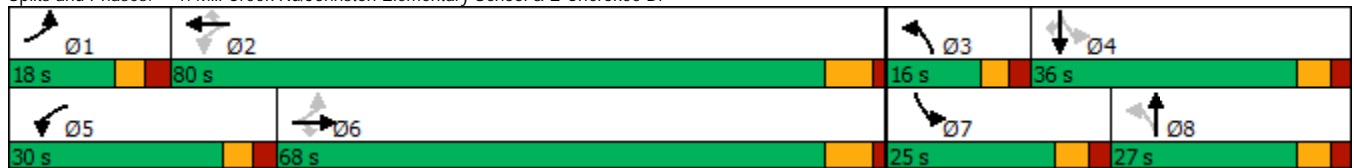
Intersection LOS: C

Intersection Capacity Utilization 78.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 71 | 66 | 89 | 109 |
| Future Volume (veh/h) | 112 | 499 | 652 | 297 | 932 | 85 | 281 | 75 | 71 | 66 | 89 | 109 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 118 | 525 | 686 | 358 | 1123 | 102 | 316 | 84 | 0 | 110 | 148 | 182 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.83 | 0.83 | 0.83 | 0.89 | 0.89 | 0.89 | 0.60 | 0.60 | 0.60 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 |
| Cap, veh/h | 261 | 1489 | 664 | 425 | 1771 | 790 | 619 | 265 | | 408 | 376 | 319 |
| Arrive On Green | 0.05 | 0.42 | 0.42 | 0.13 | 0.50 | 0.50 | 0.07 | 0.14 | 0.00 | 0.13 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1781 | 3554 | 1585 | 3401 | 1841 | 0 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 118 | 525 | 686 | 358 | 1123 | 102 | 316 | 84 | 0 | 110 | 148 | 182 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1781 | 1777 | 1585 | 1700 | 1841 | 0 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 5.4 | 14.6 | 61.1 | 15.9 | 33.5 | 5.0 | 10.5 | 5.9 | 0.0 | 7.0 | 10.1 | 15.3 |
| Cycle Q Clear(g_c), s | 5.4 | 14.6 | 61.1 | 15.9 | 33.5 | 5.0 | 10.5 | 5.9 | 0.0 | 7.0 | 10.1 | 15.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 261 | 1489 | 664 | 425 | 1771 | 790 | 619 | 265 | | 408 | 376 | 319 |
| V/C Ratio(X) | 0.45 | 0.35 | 1.03 | 0.84 | 0.63 | 0.13 | 0.51 | 0.32 | | 0.27 | 0.39 | 0.57 |
| Avail Cap(c_a), veh/h | 314 | 1489 | 664 | 491 | 1796 | 801 | 619 | 265 | | 408 | 376 | 319 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.8 | 28.4 | 41.8 | 21.4 | 26.6 | 19.5 | 49.1 | 55.6 | 0.0 | 39.4 | 49.6 | 51.7 |
| Incr Delay (d2), s/veh | 1.2 | 0.1 | 43.7 | 11.2 | 0.7 | 0.1 | 0.7 | 3.1 | 0.0 | 1.6 | 3.1 | 7.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.4 | 6.3 | 31.2 | 7.9 | 14.4 | 1.9 | 5.0 | 3.0 | 0.0 | 3.2 | 5.0 | 6.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 25.0 | 28.5 | 85.5 | 32.5 | 27.3 | 19.5 | 49.8 | 58.7 | 0.0 | 41.1 | 52.7 | 58.9 |
| LnGrp LOS | C | C | F | C | C | B | D | E | | D | D | E |
| Approach Vol, veh/h | | 1329 | | | 1583 | | | 400 | A | | 440 | |
| Approach Delay, s/veh | | 57.6 | | | 28.0 | | | 51.7 | | | 52.4 | |
| Approach LOS | | E | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.7 | 79.0 | 16.0 | 36.0 | 24.7 | 68.0 | 25.0 | 27.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 12 | 73.1 | 10.5 | * 30 | * 24 | 61.1 | * 19 | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.4 | 35.5 | 12.5 | 17.3 | 17.9 | 63.1 | 9.0 | 7.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 11.1 | 0.0 | 1.2 | 0.6 | 0.0 | 0.2 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 43.9 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 699 | 1294 | 4 | 6 | 37 |
| Future Vol, veh/h | 11 | 699 | 1294 | 4 | 6 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 82 | 82 | 83 | 83 |
| Heavy Vehicles, % | 5 | 5 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 12 | 752 | 1578 | 5 | 7 | 45 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 1583 | 0 | - | 0 | 2357 | 1581 |
| Stage 1 | - | - | - | - | 1581 | - |
| Stage 2 | - | - | - | - | 776 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | 407 | - | - | - | 38 | 131 |
| Stage 1 | - | - | - | - | 181 | - |
| Stage 2 | - | - | - | - | 445 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 407 | - | - | - | 37 | 131 |
| Mov Cap-2 Maneuver | - | - | - | - | 37 | - |
| Stage 1 | - | - | - | - | 176 | - |
| Stage 2 | - | - | - | - | 445 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 78.4 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | |
| Capacity (veh/h) | 407 | - | - | - | 97 | |
| HCM Lane V/C Ratio | 0.029 | - | - | - | 0.534 | |
| HCM Control Delay (s) | 14.1 | - | - | - | 78.4 | |
| HCM Lane LOS | B | - | - | - | F | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 2.4 | |

HCM 6th TWSC

3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 22 | 641 | 6 | 1 | 865 | 16 | 13 | 0 | 11 | 44 | 1 | 78 |
| Future Vol, veh/h | 22 | 641 | 6 | 1 | 865 | 16 | 13 | 0 | 11 | 44 | 1 | 78 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 75 | 235 | - | 175 | - | - | - | - | - | 75 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 91 | 91 | 91 | 75 | 75 | 75 | 74 | 74 | 74 |
| Heavy Vehicles, % | 6 | 6 | 6 | 2 | 2 | 2 | 8 | 8 | 8 | 1 | 1 | 1 |
| Mvmt Flow | 23 | 668 | 6 | 1 | 951 | 18 | 17 | 0 | 15 | 59 | 1 | 105 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 969 | 0 | 0 | 674 | 0 | 0 | 1729 | 1685 | 668 | 1678 | 1673 | 951 |
| Stage 1 | - | - | - | - | - | - | 714 | 714 | - | 953 | 953 | - |
| Stage 2 | - | - | - | - | - | - | 1015 | 971 | - | 725 | 720 | - |
| Critical Hdwy | 4.16 | - | - | 4.12 | - | - | 7.18 | 6.58 | 6.28 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.18 | 5.58 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.254 | - | - | 2.218 | - | - | 3.572 | 4.072 | 3.372 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 695 | - | - | 917 | - | - | 67 | 91 | 448 | 76 | 96 | 316 |
| Stage 1 | - | - | - | - | - | - | 413 | 426 | - | 313 | 339 | - |
| Stage 2 | - | - | - | - | - | - | 280 | 323 | - | 418 | 434 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 695 | - | - | 917 | - | - | 43 | 88 | 448 | 72 | 93 | 316 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 43 | 88 | - | 72 | 93 | - |
| Stage 1 | - | - | - | - | - | - | 399 | 412 | - | 303 | 339 | - |
| Stage 2 | - | - | - | - | - | - | 186 | 323 | - | 391 | 420 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.3 | 0 | 88.2 | 73.3 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 73 | 695 | - | - | 917 | - | - | 72 | 316 |
| HCM Lane V/C Ratio | 0.438 | 0.033 | - | - | 0.001 | - | - | 0.845 | 0.334 |
| HCM Control Delay (s) | 88.2 | 10.4 | - | - | 8.9 | - | - | 162.3 | 22 |
| HCM Lane LOS | F | B | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 1.7 | 0.1 | - | - | 0 | - | - | 4.1 | 1.4 |

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 90.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 26 | 665 | 795 | 52 | 218 | 65 |
| Future Vol, veh/h | 26 | 665 | 795 | 52 | 218 | 65 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 175 | 0 | 135 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 90 | 90 | 87 | 87 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 28 | 707 | 883 | 58 | 251 | 75 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 941 | 0 | - | 0 | 1646 883 |
| Stage 1 | - | - | - | - | 883 - |
| Stage 2 | - | - | - | - | 763 - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 716 | - | - | - | ~ 109 343 |
| Stage 1 | - | - | - | - | 403 - |
| Stage 2 | - | - | - | - | 459 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 716 | - | - | - | ~ 105 343 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 105 - |
| Stage 1 | - | - | - | - | 387 - |
| Stage 2 | - | - | - | - | 459 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 0.4 | 0 | \$ 556.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|----------|-------|
| Capacity (veh/h) | 716 | - | - | - | 105 | 343 |
| HCM Lane V/C Ratio | 0.039 | - | - | - | 2.386 | 0.218 |
| HCM Control Delay (s) | 10.2 | - | - | - | \$ 717.5 | 18.4 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 22.4 | 0.8 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|-------|--------|-------|-------|
| Int Delay, s/veh | 3.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 2 | 869 | 10 | 6 | 802 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Future Vol, veh/h | 2 | 869 | 10 | 6 | 802 | 5 | 18 | 0 | 23 | 5 | 0 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 175 | 175 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 89 | 89 | 89 | 73 | 73 | 73 | 58 | 58 | 58 |
| Heavy Vehicles, % | 4 | 4 | 4 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 |
| Mvmt Flow | 2 | 924 | 11 | 7 | 901 | 6 | 25 | 0 | 32 | 9 | 0 | 28 |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 907 | 0 | 0 | 935 | 0 | 0 | 1860 | 1849 | 924 | 1868 | 1857 | 904 |
| Stage 1 | - | - | - | - | - | - | 928 | 928 | - | 918 | 918 | - |
| Stage 2 | - | - | - | - | - | - | 932 | 921 | - | 950 | 939 | - |
| Critical Hdwy | 4.14 | - | - | 4.11 | - | - | 7.15 | 6.55 | 6.25 | 7.15 | 6.55 | 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.15 | 5.55 | - | 6.15 | 5.55 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.209 | - | - | 3.545 | 4.045 | 3.345 | 3.545 | 4.045 | 3.345 |
| Pot Cap-1 Maneuver | 742 | - | - | 736 | - | - | 55 | 73 | 322 | 54 | 72 | 331 |
| Stage 1 | - | - | - | - | - | - | 317 | 343 | - | 322 | 346 | - |
| Stage 2 | - | - | - | - | - | - | 316 | 345 | - | 309 | 339 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 742 | - | - | 736 | - | - | 50 | 72 | 322 | 48 | 71 | 331 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 50 | 72 | - | 48 | 71 | - |
| Stage 1 | - | - | - | - | - | - | 316 | 342 | - | 321 | 343 | - |
| Stage 2 | - | - | - | - | - | - | 287 | 342 | - | 278 | 338 | - |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0 | | | 0.1 | | | 87.1 | | | 40.1 | | |
| HCM LOS | | | | | | | F | | | E | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 95 | 742 | - | - | 736 | - | - | 138 | | | | |
| HCM Lane V/C Ratio | 0.591 | 0.003 | - | - | 0.009 | - | - | 0.262 | | | | |
| HCM Control Delay (s) | 87.1 | 9.9 | - | - | 9.9 | - | - | 40.1 | | | | |
| HCM Lane LOS | F | A | - | - | A | - | - | E | | | | |
| HCM 95th %tile Q(veh) | 2.8 | 0 | - | - | 0 | - | - | 1 | | | | |

HCM 6th TWSC

6: E Cherokee Dr & Avery Creek Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 744 | 845 | 16 | 56 | 44 |
| Future Vol, veh/h | 13 | 744 | 845 | 16 | 56 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 150 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 89 | 87 | 68 | 68 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 809 | 949 | 18 | 82 | 65 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 967 | 0 | - | 0 | 1786 949 |
| Stage 1 | - | - | - | - | 949 - |
| Stage 2 | - | - | - | - | 837 - |
| Critical Hdwy | 4.14 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.236 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 704 | - | - | - | 90 316 |
| Stage 1 | - | - | - | - | 376 - |
| Stage 2 | - | - | - | - | 425 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 704 | - | - | - | 88 316 |
| Mov Cap-2 Maneuver | - | - | - | - | 88 - |
| Stage 1 | - | - | - | - | 368 - |
| Stage 2 | - | - | - | - | 425 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 0.2 | 0 | 100.1 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 704 | - | - | - | 88 | 316 |
| HCM Lane V/C Ratio | 0.02 | - | - | - | 0.936 | 0.205 |
| HCM Control Delay (s) | 10.2 | - | - | - | 163.5 | 19.3 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 5.2 | 0.8 |

HCM 6th TWSC

7: Newcastle Walk & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 810 | 9 | 2 | 838 | 19 | 9 |
| Future Vol, veh/h | 810 | 9 | 2 | 838 | 19 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 83 | 83 | 64 | 64 |
| Heavy Vehicles, % | 4 | 4 | 2 | 2 | 7 | 7 |
| Mvmt Flow | 890 | 10 | 2 | 1010 | 30 | 14 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 900 | 0 | 1904 | 890 |
| Stage 1 | - | - | - | - | 890 | - |
| Stage 2 | - | - | - | - | 1014 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.47 | 6.27 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.563 | 3.363 |
| Pot Cap-1 Maneuver | - | - | 755 | - | 73 | 335 |
| Stage 1 | - | - | - | - | 393 | - |
| Stage 2 | - | - | - | - | 343 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 755 | - | 73 | 335 |
| Mov Cap-2 Maneuver | - | - | - | - | 73 | - |
| Stage 1 | - | - | - | - | 393 | - |
| Stage 2 | - | - | - | - | 341 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 0 | 68.5 | | | |
| HCM LOS | F | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 98 | - | - | 755 | - | |
| HCM Lane V/C Ratio | 0.446 | - | - | 0.003 | - | |
| HCM Control Delay (s) | 68.5 | - | - | 9.8 | 0 | |
| HCM Lane LOS | F | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1.9 | - | - | 0 | - | |

HCM 6th TWSC

8: E Cherokee Dr & Bradshaw Club Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh | 4.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 797 | 767 | 10 | 52 | 63 |
| Future Vol, veh/h | 16 | 797 | 767 | 10 | 52 | 63 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 180 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 91 | 91 | 81 | 81 |
| Heavy Vehicles, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Mvmt Flow | 17 | 866 | 843 | 11 | 64 | 78 |
| Major/Minor | Major1 | Major2 | Minor2 | | | |
| Conflicting Flow All | 854 | 0 | - | 0 | 1743 | 843 |
| Stage 1 | - | - | - | - | 843 | - |
| Stage 2 | - | - | - | - | 900 | - |
| Critical Hdwy | 4.15 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.245 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 773 | - | - | - | 95 | 362 |
| Stage 1 | - | - | - | - | 420 | - |
| Stage 2 | - | - | - | - | 395 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 773 | - | - | - | 93 | 362 |
| Mov Cap-2 Maneuver | - | - | - | - | 93 | - |
| Stage 1 | - | - | - | - | 411 | - |
| Stage 2 | - | - | - | - | 395 | - |
| Approach | EB | WB | | SB | | |
| HCM Control Delay, s | 0.2 | 0 | | 56.7 | | |
| HCM LOS | | | | F | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
| Capacity (veh/h) | 773 | - | - | - | 93 | 362 |
| HCM Lane V/C Ratio | 0.022 | - | - | - | 0.69 | 0.215 |
| HCM Control Delay (s) | 9.8 | - | - | - | 104 | 17.6 |
| HCM Lane LOS | A | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 3.4 | 0.8 |

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 42 | 906 | 5 | 6 | 752 | 10 | 3 | 0 | 7 | 6 | 0 | 125 |
| Future Vol, veh/h | 42 | 906 | 5 | 6 | 752 | 10 | 3 | 0 | 7 | 6 | 0 | 125 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | - | 235 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 95 | 95 | 95 | 44 | 44 | 44 | 73 | 73 | 73 |
| Heavy Vehicles, % | 4 | 4 | 4 | 2 | 2 | 2 | 14 | 14 | 14 | 1 | 1 | 1 |
| Mvmt Flow | 49 | 1053 | 6 | 6 | 792 | 11 | 7 | 0 | 16 | 8 | 0 | 171 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 803 | 0 | 0 | 1059 | 0 | 0 | 2049 | 1969 | 1056 | 1972 | 1967 | 798 |
| Stage 1 | - | - | - | - | - | - | 1154 | 1154 | - | 810 | 810 | - |
| Stage 2 | - | - | - | - | - | - | 895 | 815 | - | 1162 | 1157 | - |
| Critical Hdwy | 4.14 | - | - | 4.12 | - | - | 7.24 | 6.64 | 6.34 | 7.11 | 6.51 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.24 | 5.64 | - | 6.11 | 5.51 | - |
| Follow-up Hdwy | 2.236 | - | - | 2.218 | - | - | 3.626 | 4.126 | 3.426 | 3.509 | 4.009 | 3.309 |
| Pot Cap-1 Maneuver | 812 | - | - | 658 | - | - | 38 | 58 | 259 | 47 | 63 | 388 |
| Stage 1 | - | - | - | - | - | - | 227 | 258 | - | 375 | 395 | - |
| Stage 2 | - | - | - | - | - | - | 319 | 374 | - | 239 | 272 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 812 | - | - | 658 | - | - | 20 | 54 | 259 | 42 | 59 | 388 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 20 | 54 | - | 42 | 59 | - |
| Stage 1 | - | - | - | - | - | - | 213 | 243 | - | 353 | 391 | - |
| Stage 2 | - | - | - | - | - | - | 177 | 371 | - | 211 | 256 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-------|------|
| HCM Control Delay, s | 0.4 | 0.1 | 107.7 | 37.7 |
| HCM LOS | | | F | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 56 | 812 | - | - | 658 | - | - | 282 |
| HCM Lane V/C Ratio | 0.406 | 0.06 | - | - | 0.01 | - | - | 0.636 |
| HCM Control Delay (s) | 107.7 | 9.7 | - | - | 10.5 | - | - | 37.7 |
| HCM Lane LOS | F | A | - | - | B | - | - | E |
| HCM 95th %tile Q(veh) | 1.5 | 0.2 | - | - | 0 | - | - | 4 |

Timings

10: E Cherokee Dr & Hickory Rd

08/17/2020

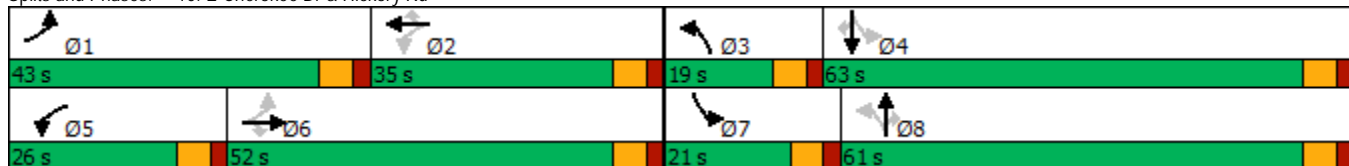


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Future Volume (vph) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 43.0 | 52.0 | 52.0 | 26.0 | 35.0 | 35.0 | 19.0 | 61.0 | 61.0 | 21.0 | 63.0 | 63.0 |
| Total Split (%) | 26.9% | 32.5% | 32.5% | 16.3% | 21.9% | 21.9% | 11.9% | 38.1% | 38.1% | 13.1% | 39.4% | 39.4% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 70.9 | 46.0 | 46.0 | 50.5 | 31.7 | 31.7 | 68.7 | 55.9 | 55.9 | 70.9 | 57.0 | 57.0 |
| Actuated g/C Ratio | 0.45 | 0.29 | 0.29 | 0.32 | 0.20 | 0.20 | 0.43 | 0.35 | 0.35 | 0.45 | 0.36 | 0.36 |
| v/c Ratio | 0.90 | 0.81 | 0.10 | 0.87 | 0.65 | 0.37 | 0.84 | 0.62 | 0.43 | 0.56 | 0.85 | 0.53 |
| Control Delay | 56.1 | 60.0 | 0.4 | 73.0 | 64.2 | 10.0 | 59.9 | 48.2 | 9.7 | 31.3 | 60.3 | 5.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 56.1 | 60.0 | 0.4 | 73.0 | 64.2 | 10.0 | 59.9 | 48.2 | 9.7 | 31.3 | 60.3 | 5.3 |
| LOS | E | E | A | E | E | A | E | D | A | C | E | A |
| Approach Delay | | 56.2 | | | 56.0 | | | 37.3 | | | 35.0 | |
| Approach LOS | | E | | | E | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 160 | |
| Actuated Cycle Length: 158.7 | |
| Natural Cycle: 100 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.90 | |
| Intersection Signal Delay: 46.1 | Intersection LOS: D |
| Intersection Capacity Utilization 93.2% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Future Volume (veh/h) | 382 | 742 | 49 | 195 | 377 | 139 | 169 | 368 | 285 | 172 | 494 | 398 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1826 | 1826 | 1826 | 1856 | 1856 | 1856 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 434 | 843 | 0 | 229 | 444 | 0 | 186 | 404 | 313 | 200 | 574 | 463 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.91 | 0.91 | 0.91 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 3 | 1 | 1 | 1 |
| Cap, veh/h | 493 | 1044 | | 295 | 713 | | 229 | 662 | 561 | 327 | 681 | 577 |
| Arrive On Green | 0.20 | 0.29 | 0.00 | 0.12 | 0.21 | 0.00 | 0.08 | 0.36 | 0.36 | 0.08 | 0.36 | 0.36 |
| Sat Flow, veh/h | 1795 | 3582 | 1598 | 1739 | 3469 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 434 | 843 | 0 | 229 | 444 | 0 | 186 | 404 | 313 | 200 | 574 | 463 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1791 | 1598 | 1739 | 1735 | 1547 | 1767 | 1856 | 1572 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 29.2 | 34.4 | 0.0 | 16.2 | 18.4 | 0.0 | 10.5 | 28.3 | 25.2 | 11.1 | 44.2 | 41.2 |
| Cycle Q Clear(g_c), s | 29.2 | 34.4 | 0.0 | 16.2 | 18.4 | 0.0 | 10.5 | 28.3 | 25.2 | 11.1 | 44.2 | 41.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 493 | 1044 | | 295 | 713 | | 229 | 662 | 561 | 327 | 681 | 577 |
| V/C Ratio(X) | 0.88 | 0.81 | | 0.78 | 0.62 | | 0.81 | 0.61 | 0.56 | 0.61 | 0.84 | 0.80 |
| Avail Cap(c_a), veh/h | 551 | 1044 | | 313 | 713 | | 235 | 662 | 561 | 348 | 681 | 577 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.4 | 51.8 | 0.0 | 44.0 | 57.1 | 0.0 | 36.6 | 41.7 | 40.8 | 31.3 | 46.3 | 45.4 |
| Incr Delay (d2), s/veh | 14.1 | 6.7 | 0.0 | 11.1 | 4.1 | 0.0 | 18.6 | 2.4 | 2.1 | 2.8 | 12.1 | 11.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 14.8 | 16.5 | 0.0 | 8.0 | 8.5 | 0.0 | 5.7 | 13.5 | 10.2 | 5.1 | 23.0 | 18.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 51.5 | 58.5 | 0.0 | 55.1 | 61.2 | 0.0 | 55.1 | 44.2 | 42.9 | 34.1 | 58.5 | 56.6 |
| LnGrp LOS | D | E | | E | E | | E | D | D | C | E | E |
| Approach Vol, veh/h | | 1277 | A | | 673 | A | | 903 | | | 1237 | |
| Approach Delay, s/veh | | 56.1 | | | 59.1 | | | 46.0 | | | 53.8 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 37.9 | 38.4 | 18.5 | 63.0 | 24.4 | 52.0 | 19.2 | 62.3 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 37.0 | 29.0 | 13.0 | 57.0 | 20.0 | 46.0 | 15.0 | 55.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 31.2 | 20.4 | 12.5 | 46.2 | 18.2 | 36.4 | 13.1 | 30.3 | | | | |
| Green Ext Time (p_c), s | 0.8 | 2.9 | 0.0 | 6.8 | 0.1 | 5.8 | 0.1 | 7.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 53.7 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
 11: E Cherokee Dr & Bart Manous Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 7.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 152 | 129 | 34 | 237 | 552 | 94 |
| Future Vol, veh/h | 152 | 129 | 34 | 237 | 552 | 94 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 100 | 160 | - | - | 100 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 71 | 71 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 8 | 8 |
| Mvmt Flow | 167 | 142 | 48 | 334 | 607 | 103 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1037 | 607 | 710 | 0 | 0 |
| Stage 1 | 607 | - | - | - | - |
| Stage 2 | 430 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.19 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.281 | - | - |
| Pot Cap-1 Maneuver | 257 | 498 | 858 | - | - |
| Stage 1 | 546 | - | - | - | - |
| Stage 2 | 658 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 243 | 498 | 858 | - | - |
| Mov Cap-2 Maneuver | 243 | - | - | - | - |
| Stage 1 | 515 | - | - | - | - |
| Stage 2 | 658 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 32.4 | 1.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 858 | - | 243 | 498 | - | - |
| HCM Lane V/C Ratio | 0.056 | - | 0.687 | 0.285 | - | - |
| HCM Control Delay (s) | 9.4 | - | 47.1 | 15.1 | - | - |
| HCM Lane LOS | A | - | E | C | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 4.5 | 1.2 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 15 | 362 | 612 | 0 | 1 | 57 |
| Future Vol, veh/h | 15 | 362 | 612 | 0 | 1 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 94 | 94 | 75 | 75 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 18 | 431 | 651 | 0 | 1 | 76 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 651 | 0 | - | 0 | 1118 651 |
| Stage 1 | - | - | - | - | 651 - |
| Stage 2 | - | - | - | - | 467 - |
| Critical Hdwy | 4.12 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 935 | - | - | - | 228 467 |
| Stage 1 | - | - | - | - | 517 - |
| Stage 2 | - | - | - | - | 629 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 935 | - | - | - | 224 467 |
| Mov Cap-2 Maneuver | - | - | - | - | 224 - |
| Stage 1 | - | - | - | - | 507 - |
| Stage 2 | - | - | - | - | 629 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0 | 14.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 935 | - | - | - | 458 |
| HCM Lane V/C Ratio | 0.019 | - | - | - | 0.169 |
| HCM Control Delay (s) | 8.9 | - | - | - | 14.5 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.6 |

HCM 6th TWSC
 13: E Cherokee Dr & Avery Rd/Thomas Rd

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 41.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | ↕ |
| Traffic Vol, veh/h | 227 | 0 | 0 | 0 | 0 | 5 | 0 | 371 | 6 | 1 | 599 | 162 |
| Future Vol, veh/h | 227 | 0 | 0 | 0 | 0 | 5 | 0 | 371 | 6 | 1 | 599 | 162 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 175 | - | - | - | - | - | - | - | - | 175 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 75 | 75 | 75 | 77 | 77 | 77 | 95 | 95 | 95 |
| Heavy Vehicles, % | 4 | 4 | 4 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 |
| Mvmt Flow | 249 | 0 | 0 | 0 | 0 | 7 | 0 | 482 | 8 | 1 | 631 | 171 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|------|-----|--------|---|---|--------|---|---|
| Conflicting Flow All | 1123 | 1123 | 631 | 1205 | 1290 | 486 | 802 | 0 | 0 | 490 | 0 | 0 |
| Stage 1 | 633 | 633 | - | 486 | 486 | - | - | - | - | - | - | - |
| Stage 2 | 490 | 490 | - | 719 | 804 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.14 | 6.54 | 6.24 | 7.1 | 6.5 | 6.2 | 4.13 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.14 | 5.54 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.536 | 4.036 | 3.336 | 3.5 | 4 | 3.3 | 2.227 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 181 | 204 | 477 | 162 | 165 | 585 | 817 | - | - | 1073 | - | - |
| Stage 1 | 464 | 470 | - | 566 | 554 | - | - | - | - | - | - | - |
| Stage 2 | 556 | 545 | - | 423 | 398 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 179 | 204 | 477 | 162 | 165 | 585 | 817 | - | - | 1073 | - | - |
| Mov Cap-2 Maneuver | ~ 179 | 204 | - | 162 | 165 | - | - | - | - | - | - | - |
| Stage 1 | 464 | 469 | - | 566 | 554 | - | - | - | - | - | - | - |
| Stage 2 | 550 | 545 | - | 422 | 397 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 256.7 | | | 11.2 | | | 0 | | | 0 | | |
| HCM LOS | F | | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 817 | - | - | 179 | - | 585 | 1073 | - | - |
| HCM Lane V/C Ratio | - | - | - | 1.394 | - | 0.011 | 0.001 | - | - |
| HCM Control Delay (s) | 0 | - | - | 256.7 | 0 | 11.2 | 8.4 | 0 | - |
| HCM Lane LOS | A | - | - | F | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 15 | - | 0 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Future Volume (vph) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 58.0 | 58.0 | 15.0 | 58.0 | 58.0 | 15.0 | 22.0 | 22.0 | 25.0 | 32.0 | 32.0 |
| Total Split (%) | 12.5% | 48.3% | 48.3% | 12.5% | 48.3% | 48.3% | 12.5% | 18.3% | 18.3% | 20.8% | 26.7% | 26.7% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 59.8 | 52.0 | 52.0 | 62.8 | 55.6 | 55.6 | 22.2 | 14.0 | 14.0 | 39.0 | 27.3 | 27.3 |
| Actuated g/C Ratio | 0.51 | 0.44 | 0.44 | 0.53 | 0.47 | 0.47 | 0.19 | 0.12 | 0.12 | 0.33 | 0.23 | 0.23 |
| v/c Ratio | 0.32 | 0.64 | 0.18 | 0.47 | 0.80 | 0.31 | 0.32 | 0.73 | 0.54 | 0.89 | 0.68 | 0.28 |
| Control Delay | 15.9 | 30.4 | 1.4 | 17.4 | 37.0 | 6.9 | 32.4 | 69.0 | 12.5 | 60.0 | 52.1 | 7.2 |
| 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 | 15.9 | 30.4 | 1.4 | 17.4 | 37.0 | 6.9 | 32.4 | 69.0 | 12.5 | 60.0 | 52.1 | 7.2 |
| LOS | B | C | A | B | D | A | C | E | B | E | D | A |
| Approach Delay | | 23.3 | | | 27.1 | | | 37.0 | | | 47.9 | |
| Approach LOS | | C | | | C | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 117.9 | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.89 | |
| Intersection Signal Delay: 32.7 | Intersection LOS: C |
| Intersection Capacity Utilization 73.7% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr

| | | | |
|------------|------------|------------|------------|
| Ø1 15 s | Ø2 58 s | Ø3 15 s | Ø4 32 s |
| Ø5 15 s | Ø6 58 s | Ø7 25 s | Ø8 22 s |

HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Future Volume (veh/h) | 70 | 451 | 123 | 138 | 562 | 207 | 55 | 106 | 129 | 245 | 207 | 95 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1841 | 1841 | 1841 | 1826 | 1826 | 1826 | 1885 | 1885 | 1885 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h | 80 | 512 | 0 | 168 | 685 | 0 | 83 | 161 | 0 | 327 | 276 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.82 | 0.82 | 0.82 | 0.66 | 0.66 | 0.66 | 0.75 | 0.75 | 0.75 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 1 | 8 | 8 | 8 |
| Cap, veh/h | 259 | 834 | | 392 | 882 | | 239 | 195 | | 367 | 382 | |
| Arrive On Green | 0.04 | 0.45 | 0.00 | 0.07 | 0.48 | 0.00 | 0.05 | 0.10 | 0.00 | 0.17 | 0.21 | 0.00 |
| Sat Flow, veh/h | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Grp Volume(v), veh/h | 80 | 512 | 0 | 168 | 685 | 0 | 83 | 161 | 0 | 327 | 276 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1753 | 1841 | 1560 | 1739 | 1826 | 1547 | 1795 | 1885 | 1598 | 1697 | 1781 | 1510 |
| Q Serve(g_s), s | 2.8 | 24.2 | 0.0 | 5.9 | 35.6 | 0.0 | 4.7 | 9.6 | 0.0 | 19.0 | 16.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 24.2 | 0.0 | 5.9 | 35.6 | 0.0 | 4.7 | 9.6 | 0.0 | 19.0 | 16.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 259 | 834 | | 392 | 882 | | 239 | 195 | | 367 | 382 | |
| V/C Ratio(X) | 0.31 | 0.61 | | 0.43 | 0.78 | | 0.35 | 0.83 | | 0.89 | 0.72 | |
| Avail Cap(c_a), veh/h | 329 | 834 | | 409 | 882 | | 282 | 263 | | 367 | 404 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 20.6 | 23.8 | 0.0 | 17.7 | 24.5 | 0.0 | 42.7 | 50.4 | 0.0 | 37.2 | 41.9 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 3.4 | 0.0 | 0.7 | 6.7 | 0.0 | 0.9 | 14.6 | 0.0 | 22.9 | 5.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 10.6 | 0.0 | 2.2 | 15.8 | 0.0 | 2.1 | 5.2 | 0.0 | 10.1 | 7.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 21.2 | 27.1 | 0.0 | 18.4 | 31.2 | 0.0 | 43.6 | 65.0 | 0.0 | 60.1 | 47.8 | 0.0 |
| LnGrp LOS | C | C | | B | C | | D | E | | E | D | |
| Approach Vol, veh/h | | 592 | A | | 853 | A | | 244 | A | | 603 | A |
| Approach Delay, s/veh | | 26.3 | | | 28.7 | | | 57.7 | | | 54.5 | |
| Approach LOS | | C | | | C | | | E | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.5 | 61.4 | 12.2 | 30.6 | 13.9 | 58.0 | 25.0 | 17.9 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 9.0 | 52.0 | 9.0 | 26.0 | 9.0 | 52.0 | 19.0 | 16.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.8 | 37.6 | 6.7 | 18.5 | 7.9 | 26.2 | 21.0 | 11.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.7 | 0.0 | 0.8 | 0.0 | 3.0 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 37.9 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
 15: E Cherokee Dr & Johnson Brady Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 17 | 10 | 646 | 631 | 1 |
| Future Vol, veh/h | 9 | 17 | 10 | 646 | 631 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 50 | 50 | 77 | 77 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 18 | 34 | 13 | 839 | 742 | 1 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1608 | 743 | 743 | 0 | 0 |
| Stage 1 | 743 | - | - | - | - |
| Stage 2 | 865 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 117 | 418 | 855 | - | - |
| Stage 1 | 474 | - | - | - | - |
| Stage 2 | 416 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 115 | 418 | 855 | - | - |
| Mov Cap-2 Maneuver | 115 | - | - | - | - |
| Stage 1 | 467 | - | - | - | - |
| Stage 2 | 416 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 26.5 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 855 | - | 219 | - | - |
| HCM Lane V/C Ratio | 0.015 | - | 0.237 | - | - |
| HCM Control Delay (s) | 9.3 | - | 26.5 | - | - |
| HCM Lane LOS | A | - | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.9 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 55 | 6 | 10 | 668 | 594 | 44 |
| Future Vol, veh/h | 55 | 6 | 10 | 668 | 594 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | 175 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 73 | 73 | 80 | 80 | 87 | 87 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 6 | 6 |
| Mvmt Flow | 75 | 8 | 13 | 835 | 683 | 51 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1544 | 683 | 734 | 0 | 0 |
| Stage 1 | 683 | - | - | - | - |
| Stage 2 | 861 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 126 | 449 | 862 | - | - |
| Stage 1 | 502 | - | - | - | - |
| Stage 2 | 414 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 124 | 449 | 862 | - | - |
| Mov Cap-2 Maneuver | 124 | - | - | - | - |
| Stage 1 | 494 | - | - | - | - |
| Stage 2 | 414 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 68.5 | 0.1 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 862 | - | 134 | - | - |
| HCM Lane V/C Ratio | 0.015 | - | 0.624 | - | - |
| HCM Control Delay (s) | 9.2 | - | 68.5 | - | - |
| HCM Lane LOS | A | - | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 3.3 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 700 | 26 | 5 | 609 | 23 | 3 |
| Future Vol, veh/h | 700 | 26 | 5 | 609 | 23 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 84 | 84 | 86 | 86 | 64 | 64 |
| Heavy Vehicles, % | 3 | 3 | 6 | 6 | 0 | 0 |
| Mvmt Flow | 833 | 31 | 6 | 708 | 36 | 5 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 864 | 0 |
| Stage 1 | - | - | - | 833 |
| Stage 2 | - | - | - | 720 |
| Critical Hdwy | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | - | - | 762 | - |
| Stage 1 | - | - | - | 430 |
| Stage 2 | - | - | - | 486 |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 762 | - |
| Mov Cap-2 Maneuver | - | - | - | 124 |
| Stage 1 | - | - | - | 430 |
| Stage 2 | - | - | - | 480 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 43.1 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 134 | - | - | 762 | - |
| HCM Lane V/C Ratio | 0.303 | - | - | 0.008 | - |
| HCM Control Delay (s) | 43.1 | - | - | 9.8 | 0 |
| HCM Lane LOS | E | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.2 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | FF | | FF | ↑ | ↑ | |
| Traffic Vol, veh/h | 5 | 80 | 3 | 601 | 775 | 3 |
| Future Vol, veh/h | 5 | 80 | 3 | 601 | 775 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 65 | 65 | 93 | 93 | 77 | 77 |
| Heavy Vehicles, % | 5 | 5 | 4 | 4 | 3 | 3 |
| Mvmt Flow | 8 | 123 | 3 | 646 | 1006 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1660 | 1008 | 1010 | 0 | 0 |
| Stage 1 | 1008 | - | - | - | - |
| Stage 2 | 652 | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | 4.14 | - | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | 2.236 | - | - |
| Pot Cap-1 Maneuver | 105 | 288 | 678 | - | - |
| Stage 1 | 348 | - | - | - | - |
| Stage 2 | 513 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 105 | 288 | 678 | - | - |
| Mov Cap-2 Maneuver | 105 | - | - | - | - |
| Stage 1 | 347 | - | - | - | - |
| Stage 2 | 513 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 31.9 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 678 | - | 261 | - | - |
| HCM Lane V/C Ratio | 0.005 | - | 0.501 | - | - |
| HCM Control Delay (s) | 10.3 | - | 31.9 | - | - |
| HCM Lane LOS | B | - | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.6 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 48.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 148 | 117 | 377 | 183 | 115 | 497 |
| Future Vol, veh/h | 148 | 117 | 377 | 183 | 115 | 497 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | 235 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 61 | 61 | 86 | 86 | 84 | 84 |
| Heavy Vehicles, % | 0 | 0 | 3 | 3 | 1 | 1 |
| Mvmt Flow | 243 | 192 | 438 | 213 | 137 | 592 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1304 | 438 | 0 | 0 | 651 |
| Stage 1 | 438 | - | - | - | - |
| Stage 2 | 866 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.11 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.209 |
| Pot Cap-1 Maneuver | ~ 179 | 623 | - | - | 940 |
| Stage 1 | 655 | - | - | - | - |
| Stage 2 | 415 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 153 | 623 | - | - | 940 |
| Mov Cap-2 Maneuver | ~ 153 | - | - | - | - |
| Stage 1 | 655 | - | - | - | - |
| Stage 2 | 354 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 198.7 | 0 | 1.8 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-------|-----|
| Capacity (veh/h) | - | - | 153 | 623 | 940 | - |
| HCM Lane V/C Ratio | - | - | 1.586 | 0.308 | 0.146 | - |
| HCM Control Delay (s) | - | - | \$ 345.2 | 13.3 | 9.5 | - |
| HCM Lane LOS | - | - | F | B | A | - |
| HCM 95th %tile Q(veh) | - | - | 16.7 | 1.3 | 0.5 | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020

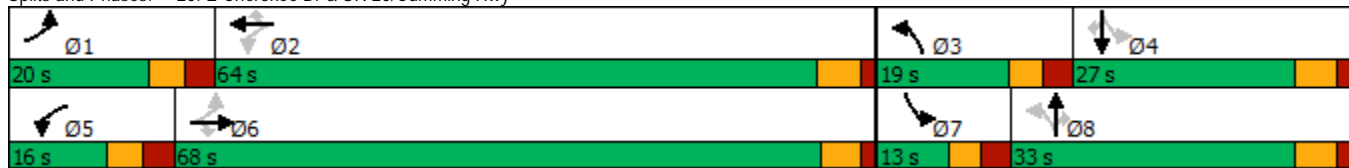


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Future Volume (vph) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 68.0 | 68.0 | 16.0 | 64.0 | 64.0 | 19.0 | 33.0 | 33.0 | 13.0 | 27.0 | 27.0 |
| Total Split (%) | 15.4% | 52.3% | 52.3% | 12.3% | 49.2% | 49.2% | 14.6% | 25.4% | 25.4% | 10.0% | 20.8% | 20.8% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 69.6 | 62.5 | 62.5 | 72.9 | 66.2 | 66.2 | 39.6 | 27.4 | 27.4 | 28.0 | 21.4 | 21.4 |
| Actuated g/C Ratio | 0.54 | 0.48 | 0.48 | 0.56 | 0.51 | 0.51 | 0.31 | 0.21 | 0.21 | 0.22 | 0.17 | 0.17 |
| v/c Ratio | 0.11 | 0.34 | 0.24 | 0.35 | 0.33 | 0.13 | 1.02 | 0.57 | 0.42 | 0.60 | 1.01 | 0.19 |
| Control Delay | 11.8 | 21.4 | 3.2 | 14.5 | 19.7 | 2.3 | 104.9 | 52.9 | 8.5 | 48.7 | 108.2 | 1.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.8 | 21.4 | 3.2 | 14.5 | 19.7 | 2.3 | 104.9 | 52.9 | 8.5 | 48.7 | 108.2 | 1.1 |
| LOS | B | C | A | B | B | A | F | D | A | D | F | A |
| Approach Delay | | 17.6 | | | 17.2 | | | 57.3 | | | 77.1 | |
| Approach LOS | | B | | | B | | | E | | | E | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 129.6 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.02 | |
| Intersection Signal Delay: 35.1 | Intersection LOS: D |
| Intersection Capacity Utilization 65.9% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|------|-------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Future Volume (veh/h) | 36 | 713 | 176 | 117 | 730 | 101 | 209 | 200 | 185 | 133 | 265 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1767 | 1767 | 1767 | 1752 | 1752 | 1752 | 1811 | 1811 | 1811 | 1826 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 40 | 784 | 0 | 126 | 785 | 0 | 227 | 217 | 201 | 151 | 301 | 67 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 9 | 9 | 9 | 10 | 10 | 10 | 6 | 6 | 6 | 5 | 5 | 5 |
| Cap, veh/h | 397 | 2338 | | 407 | 2394 | | 228 | 385 | 326 | 250 | 303 | 257 |
| Arrive On Green | 0.05 | 0.48 | 0.00 | 0.06 | 0.50 | 0.00 | 0.10 | 0.21 | 0.21 | 0.05 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1682 | 4823 | 1497 | 1668 | 4782 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Grp Volume(v), veh/h | 40 | 784 | 0 | 126 | 785 | 0 | 227 | 217 | 201 | 151 | 301 | 67 |
| Grp Sat Flow(s),veh/h/ln | 1682 | 1608 | 1497 | 1668 | 1594 | 1485 | 1725 | 1811 | 1535 | 1739 | 1826 | 1547 |
| Q Serve(g_s), s | 1.5 | 12.9 | 0.0 | 4.8 | 12.6 | 0.0 | 12.8 | 13.8 | 15.3 | 7.0 | 21.2 | 4.9 |
| Cycle Q Clear(g_c), s | 1.5 | 12.9 | 0.0 | 4.8 | 12.6 | 0.0 | 12.8 | 13.8 | 15.3 | 7.0 | 21.2 | 4.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 397 | 2338 | | 407 | 2394 | | 228 | 385 | 326 | 250 | 303 | 257 |
| V/C Ratio(X) | 0.10 | 0.34 | | 0.31 | 0.33 | | 0.99 | 0.56 | 0.62 | 0.60 | 0.99 | 0.26 |
| Avail Cap(c_a), veh/h | 495 | 2338 | | 426 | 2394 | | 228 | 385 | 326 | 250 | 303 | 257 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.9 | 20.4 | 0.0 | 15.2 | 19.2 | 0.0 | 42.1 | 45.4 | 46.0 | 45.4 | 53.7 | 46.9 |
| Incr Delay (d2), s/veh | 0.1 | 0.4 | 0.0 | 0.4 | 0.4 | 0.0 | 57.6 | 5.9 | 8.4 | 4.1 | 50.0 | 2.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 4.7 | 0.0 | 1.8 | 4.6 | 0.0 | 9.5 | 6.7 | 6.5 | 1.4 | 13.7 | 2.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.0 | 20.8 | 0.0 | 15.6 | 19.6 | 0.0 | 99.7 | 51.3 | 54.4 | 49.5 | 103.7 | 49.3 |
| LnGrp LOS | B | C | | B | B | | F | D | D | D | F | D |
| Approach Vol, veh/h | | 824 | A | | 911 | A | | 645 | | | 519 | |
| Approach Delay, s/veh | | 20.5 | | | 19.0 | | | 69.3 | | | 80.9 | |
| Approach LOS | | C | | | B | | | E | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.5 | 70.4 | 19.0 | 27.0 | 14.5 | 68.4 | 13.0 | 33.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 13.6 | 58.1 | * 13 | * 21 | 9.4 | * 63 | 7.0 | * 27 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 14.6 | 14.8 | 23.2 | 6.8 | 14.9 | 9.0 | 17.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 5.8 | 0.0 | 0.0 | 0.1 | 5.8 | 0.0 | 1.3 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 41.7 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | B69 | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | T | T | R | T | L | L | TR |
| Maximum Queue (ft) | 363 | 386 | 304 | 520 | 195 | 446 | 398 | 370 | 317 | 149 | 175 | 289 |
| Average Queue (ft) | 66 | 197 | 143 | 246 | 171 | 274 | 235 | 35 | 19 | 77 | 141 | 95 |
| 95th Queue (ft) | 171 | 308 | 278 | 442 | 228 | 429 | 370 | 143 | 124 | 179 | 197 | 243 |
| Link Distance (ft) | | 925 | 925 | 925 | | 374 | 374 | | 284 | | | 608 |
| Upstream Blk Time (%) | | | | | | 2 | 1 | 0 | 0 | | | |
| Queuing Penalty (veh) | | | | | | 15 | 8 | 0 | 4 | | | |
| Storage Bay Dist (ft) | 315 | | | | 145 | | | 340 | | 125 | 125 | |
| Storage Blk Time (%) | | 1 | | | 27 | 16 | 1 | | | 1 | 18 | 3 |
| Queuing Penalty (veh) | | 1 | | | 124 | 49 | 1 | | | 2 | 27 | 8 |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | SB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | T | R |
| Maximum Queue (ft) | 88 | 127 | 127 |
| Average Queue (ft) | 32 | 59 | 37 |
| 95th Queue (ft) | 74 | 114 | 76 |
| Link Distance (ft) | | 132 | |
| Upstream Blk Time (%) | | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |
| Storage Bay Dist (ft) | 135 | | 135 |
| Storage Blk Time (%) | | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | B69 | WB | SB |
|-----------------------|-----|-----|------|-----|
| Directions Served | L | T | TR | LR |
| Maximum Queue (ft) | 68 | 445 | 31 | 98 |
| Average Queue (ft) | 10 | 16 | 1 | 26 |
| 95th Queue (ft) | 40 | 152 | 11 | 59 |
| Link Distance (ft) | | 374 | 1487 | 350 |
| Upstream Blk Time (%) | | 0 | | |
| Queuing Penalty (veh) | | 0 | | |
| Storage Bay Dist (ft) | 235 | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|----|
| Directions Served | L | L | LTR | LT | R |
| Maximum Queue (ft) | 50 | 20 | 44 | 93 | 86 |
| Average Queue (ft) | 9 | 1 | 16 | 34 | 31 |
| 95th Queue (ft) | 31 | 7 | 40 | 70 | 58 |
| Link Distance (ft) | | | 511 | 805 | |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | | 75 |
| Storage Blk Time (%) | | | | 2 | 0 |
| Queuing Penalty (veh) | | | | 2 | 0 |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 31 | 499 | 185 |
| Average Queue (ft) | 14 | 267 | 115 |
| 95th Queue (ft) | 37 | 497 | 249 |
| Link Distance (ft) | | 636 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 135 |
| Storage Blk Time (%) | | 64 | 0 |
| Queuing Penalty (veh) | | 41 | 0 |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 11 | 20 | 65 | 71 |
| Average Queue (ft) | 0 | 1 | 28 | 14 |
| 95th Queue (ft) | 4 | 7 | 65 | 40 |
| Link Distance (ft) | | | 532 | 436 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | SB | SB |
|-----------------------|-----|-----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 50 | 66 | 36 |
| Average Queue (ft) | 7 | 28 | 15 |
| 95th Queue (ft) | 30 | 54 | 30 |
| Link Distance (ft) | | 272 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | 0 | |
| Queuing Penalty (veh) | | 0 | |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 53 | 48 |
| Average Queue (ft) | 2 | 15 |
| 95th Queue (ft) | 18 | 39 |
| Link Distance (ft) | 2496 | 594 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB | SB |
|-----------------------|-----|-----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 28 | 116 | 96 |
| Average Queue (ft) | 5 | 49 | 35 |
| 95th Queue (ft) | 22 | 98 | 67 |
| Link Distance (ft) | | 464 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | 2 | 0 |
| Queuing Penalty (veh) | | 2 | 0 |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 42 | 26 | 44 | 67 |
| Average Queue (ft) | 13 | 3 | 7 | 37 |
| 95th Queue (ft) | 35 | 17 | 25 | 59 |
| Link Distance (ft) | | | 630 | 204 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| Directions Served | L | T | T | L | T | T | L | T | R | L | T | R |
| Maximum Queue (ft) | 384 | 480 | 448 | 327 | 301 | 287 | 225 | 649 | 420 | 170 | 1132 | 525 |
| Average Queue (ft) | 271 | 290 | 275 | 134 | 170 | 151 | 140 | 285 | 150 | 122 | 469 | 237 |
| 95th Queue (ft) | 419 | 412 | 378 | 253 | 258 | 249 | 241 | 487 | 382 | 214 | 822 | 548 |
| Link Distance (ft) | | 905 | 905 | | 679 | 679 | | 2398 | | | 1364 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 335 | | | 300 | | | 150 | | 220 | 100 | | 475 |
| Storage Blk Time (%) | 5 | 3 | 2 | 1 | 0 | | 9 | 23 | 1 | 14 | 49 | |
| Queuing Penalty (veh) | 19 | 10 | 1 | 2 | 0 | | 57 | 104 | 5 | 127 | 280 | |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | NB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 92 | 50 | 21 |
| Average Queue (ft) | 34 | 18 | 1 |
| 95th Queue (ft) | 69 | 45 | 7 |
| Link Distance (ft) | 350 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 160 | 100 |
| Storage Blk Time (%) | 0 | | |
| Queuing Penalty (veh) | 0 | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|-----|
| Directions Served | L | LR |
| Maximum Queue (ft) | 28 | 47 |
| Average Queue (ft) | 3 | 25 |
| 95th Queue (ft) | 16 | 44 |
| Link Distance (ft) | | 759 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LT | LTR |
| Maximum Queue (ft) | 270 | 30 |
| Average Queue (ft) | 111 | 4 |
| 95th Queue (ft) | 242 | 20 |
| Link Distance (ft) | 599 | 581 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | 9 | |
| Queuing Penalty (veh) | 0 | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|-----------------------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | R | L | T | R |
| Maximum Queue (ft) | 224 | 369 | 225 | 244 | 693 | 245 | 74 | 160 | 138 | 239 | 545 | 240 |
| Average Queue (ft) | 55 | 182 | 16 | 67 | 257 | 61 | 36 | 86 | 8 | 166 | 213 | 42 |
| 95th Queue (ft) | 156 | 269 | 112 | 156 | 529 | 235 | 72 | 156 | 58 | 247 | 422 | 192 |
| Link Distance (ft) | | 3756 | | | 1100 | | | 626 | | | 702 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | 175 | 195 | | 195 | 185 | | 185 | 190 | | 190 |
| Storage Blk Time (%) | | 7 | | | 13 | 0 | | | | 5 | | 9 |
| Queuing Penalty (veh) | | 14 | | | 45 | 0 | | | | 15 | | 31 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 49 | 27 |
| Average Queue (ft) | 18 | 6 |
| 95th Queue (ft) | 43 | 23 |
| Link Distance (ft) | 390 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 73 | 31 |
| Average Queue (ft) | 39 | 2 |
| 95th Queue (ft) | 74 | 15 |
| Link Distance (ft) | 611 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 72 | 50 |
| Average Queue (ft) | 3 | 18 |
| 95th Queue (ft) | 25 | 43 |
| Link Distance (ft) | 784 | 510 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 92 | 31 |
| Average Queue (ft) | 36 | 1 |
| 95th Queue (ft) | 71 | 10 |
| Link Distance (ft) | 657 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | NB | SB |
|-----------------------|-----|-----|----|
| Directions Served | L | R | L |
| Maximum Queue (ft) | 169 | 20 | 72 |
| Average Queue (ft) | 70 | 1 | 31 |
| 95th Queue (ft) | 130 | 7 | 55 |
| Link Distance (ft) | 478 | | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 200 | 235 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|
| Directions Served | L | T | T | T | R | L | T | T | T | L | T | R |
| Maximum Queue (ft) | 289 | 319 | 253 | 144 | 153 | 114 | 214 | 202 | 186 | 279 | 342 | 91 |
| Average Queue (ft) | 33 | 180 | 115 | 35 | 5 | 51 | 145 | 115 | 49 | 150 | 157 | 51 |
| 95th Queue (ft) | 128 | 272 | 228 | 117 | 52 | 97 | 204 | 189 | 133 | 265 | 279 | 79 |
| Link Distance (ft) | | 714 | 714 | 714 | | | 1292 | 1292 | 1292 | | | 592 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | 225 | 500 | | | | 230 | | 550 |
| Storage Blk Time (%) | | 2 | | | | | | | | 4 | 1 | |
| Queuing Penalty (veh) | | 1 | | | | | | | | 17 | 3 | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | SB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | T | R |
| Maximum Queue (ft) | 270 | 368 | 265 |
| Average Queue (ft) | 109 | 218 | 39 |
| 95th Queue (ft) | 231 | 336 | 142 |
| Link Distance (ft) | | 762 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 220 | | 220 |
| Storage Blk Time (%) | | 10 | |
| Queuing Penalty (veh) | | 20 | |

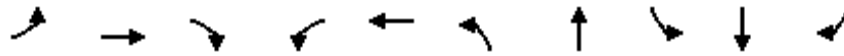
Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 1036 |
|------------------------------------|

Timings

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Lane Group | EBL | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 1118 | 511 | 160 | 1022 | 678 | 7 | 12 | 10 | 16 |
| Future Volume (vph) | 20 | 1118 | 511 | 160 | 1022 | 678 | 7 | 12 | 10 | 16 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Prot | NA | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 8 | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | | | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 3 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 20.0 | 20.0 | 5.0 | 20.0 | 5.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 11.2 | 27.4 | 27.4 | 11.2 | 27.4 | 11.0 | 24.2 | 17.0 | 24.2 | 24.2 |
| Total Split (s) | 15.0 | 72.0 | 72.0 | 20.0 | 77.0 | 31.0 | 41.0 | 17.0 | 27.0 | 27.0 |
| Total Split (%) | 10.0% | 48.0% | 48.0% | 13.3% | 51.3% | 20.7% | 27.3% | 11.3% | 18.0% | 18.0% |
| Yellow Time (s) | 3.4 | 5.4 | 5.4 | 3.4 | 5.4 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.8 | 1.5 | 1.5 | 2.8 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 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) | 6.2 | 6.9 | 6.9 | 6.2 | 6.9 | 5.5 | 6.2 | 6.2 | 6.2 | 6.2 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | Max | Max | Max | Max |
| Act Effect Green (s) | 66.0 | 59.0 | 59.0 | 79.4 | 71.2 | 25.6 | 34.9 | 31.7 | 20.9 | 20.9 |
| Actuated g/C Ratio | 0.46 | 0.41 | 0.41 | 0.55 | 0.50 | 0.18 | 0.24 | 0.22 | 0.15 | 0.15 |
| v/c Ratio | 0.11 | 0.80 | 0.60 | 0.79 | 0.69 | 1.19 | 0.43 | 0.05 | 0.05 | 0.06 |
| Control Delay | 15.9 | 41.9 | 10.4 | 51.0 | 30.9 | 152.3 | 8.7 | 34.2 | 56.6 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.9 | 41.9 | 10.4 | 51.0 | 30.9 | 152.3 | 8.7 | 34.2 | 56.6 | 0.3 |
| LOS | B | D | B | D | C | F | A | C | E | A |
| Approach Delay | | 31.8 | | | 33.6 | | 116.7 | | 25.9 | |
| Approach LOS | | C | | | C | | F | | C | |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 143.8

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 52.4

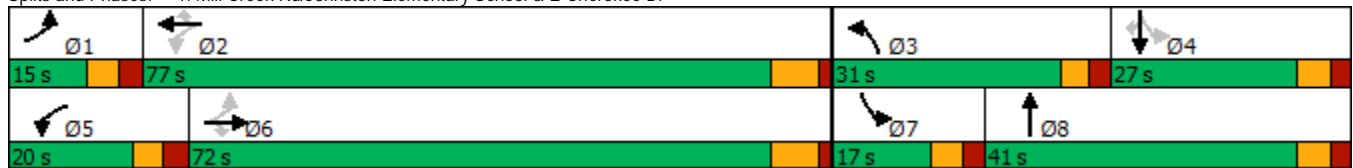
Intersection LOS: D

Intersection Capacity Utilization 81.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr



HCM 6th Signalized Intersection Summary

1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|------|------|-------|-------|------|-------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 1118 | 511 | 160 | 1022 | 0 | 678 | 7 | 216 | 12 | 10 | 16 |
| Future Volume (veh/h) | 20 | 1118 | 511 | 160 | 1022 | 0 | 678 | 7 | 216 | 12 | 10 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 21 | 1177 | 538 | 188 | 1202 | 0 | 737 | 8 | 0 | 16 | 14 | 22 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.73 | 0.73 | 0.73 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Cap, veh/h | 174 | 1444 | 644 | 219 | 1630 | 727 | 651 | 481 | | 414 | 290 | 246 |
| Arrive On Green | 0.02 | 0.40 | 0.40 | 0.08 | 0.46 | 0.00 | 0.19 | 0.26 | 0.00 | 0.08 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1795 | 3582 | 1598 | 1781 | 3554 | 1585 | 3483 | 1885 | 0 | 1810 | 1900 | 1610 |
| Grp Volume(v), veh/h | 21 | 1177 | 538 | 188 | 1202 | 0 | 737 | 8 | 0 | 16 | 14 | 22 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1791 | 1598 | 1781 | 1777 | 1585 | 1742 | 1885 | 0 | 1810 | 1900 | 1610 |
| Q Serve(g_s), s | 0.9 | 39.8 | 41.3 | 8.2 | 37.7 | 0.0 | 25.5 | 0.4 | 0.0 | 0.9 | 0.9 | 1.6 |
| Cycle Q Clear(g_c), s | 0.9 | 39.8 | 41.3 | 8.2 | 37.7 | 0.0 | 25.5 | 0.4 | 0.0 | 0.9 | 0.9 | 1.6 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 174 | 1444 | 644 | 219 | 1630 | 727 | 651 | 481 | | 414 | 290 | 246 |
| V/C Ratio(X) | 0.12 | 0.82 | 0.84 | 0.86 | 0.74 | 0.00 | 1.13 | 0.02 | | 0.04 | 0.05 | 0.09 |
| Avail Cap(c_a), veh/h | 254 | 1709 | 762 | 265 | 1826 | 815 | 651 | 481 | | 414 | 290 | 246 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 26.4 | 36.2 | 36.6 | 30.2 | 30.2 | 0.0 | 55.5 | 38.0 | 0.0 | 40.6 | 49.4 | 49.7 |
| Incr Delay (d2), s/veh | 0.3 | 2.7 | 7.0 | 20.6 | 1.4 | 0.0 | 77.5 | 0.1 | 0.0 | 0.2 | 0.3 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 17.8 | 17.1 | 4.7 | 16.3 | 0.0 | 18.1 | 0.2 | 0.0 | 0.4 | 0.4 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 26.8 | 38.9 | 43.6 | 50.8 | 31.6 | 0.0 | 133.0 | 38.1 | 0.0 | 40.8 | 49.7 | 50.4 |
| LnGrp LOS | C | D | D | D | C | A | F | D | | D | D | D |
| Approach Vol, veh/h | | 1736 | | | 1390 | | | 745 | A | | 52 | |
| Approach Delay, s/veh | | 40.2 | | | 34.2 | | | 131.9 | | | 47.2 | |
| Approach LOS | | D | | | C | | | F | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.9 | 69.5 | 31.0 | 27.0 | 16.5 | 61.9 | 17.0 | 41.0 | | | | |
| Change Period (Y+Rc), s | * 6.2 | 6.9 | 5.5 | * 6.2 | * 6.2 | 6.9 | * 6.2 | * 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.8 | 70.1 | 25.5 | * 21 | * 14 | 65.1 | * 11 | * 35 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.9 | 39.7 | 27.5 | 3.6 | 10.2 | 43.3 | 2.9 | 2.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 10.9 | 0.0 | 0.1 | 0.2 | 11.7 | 0.0 | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | 55.6 | | | | | | | | | | | |
| HCM 6th LOS | E | | | | | | | | | | | |

Notes

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

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC

2: E Cherokee Dr & Copper Ridge Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 28 | 1299 | 1142 | 7 | 1 | 23 |
| Future Vol, veh/h | 28 | 1299 | 1142 | 7 | 1 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 87 | 87 | 60 | 60 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 32 | 1476 | 1313 | 8 | 2 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 1321 | 0 | - | 0 | 2857 1317 |
| Stage 1 | - | - | - | - | 1317 - |
| Stage 2 | - | - | - | - | 1540 - |
| Critical Hdwy | 4.11 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 526 | - | - | - | 19 194 |
| Stage 1 | - | - | - | - | 253 - |
| Stage 2 | - | - | - | - | 197 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 526 | - | - | - | 18 194 |
| Mov Cap-2 Maneuver | - | - | - | - | 18 - |
| Stage 1 | - | - | - | - | 238 - |
| Stage 2 | - | - | - | - | 197 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 41.4 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 526 | - | - | - | 138 |
| HCM Lane V/C Ratio | 0.06 | - | - | - | 0.29 |
| HCM Control Delay (s) | 12.3 | - | - | - | 41.4 |
| HCM Lane LOS | B | - | - | - | E |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 1.1 |

HCM 6th TWSC

3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 68 | 895 | 17 | 5 | 975 | 23 | 8 | 0 | 2 | 9 | 5 | 42 |
| Future Vol, veh/h | 68 | 895 | 17 | 5 | 975 | 23 | 8 | 0 | 2 | 9 | 5 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 75 | 235 | - | 175 | - | - | - | - | - | 75 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 91 | 91 | 91 | 50 | 50 | 50 | 93 | 93 | 93 |
| Heavy Vehicles, % | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 77 | 1017 | 19 | 5 | 1071 | 25 | 16 | 0 | 4 | 10 | 5 | 45 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 1096 | 0 | 0 | 1036 | 0 | 0 | 2290 | 2277 | 1017 | 2264 | 2271 | 1071 |
| Stage 1 | - | - | - | - | - | - | 1171 | 1171 | - | 1081 | 1081 | - |
| Stage 2 | - | - | - | - | - | - | 1119 | 1106 | - | 1183 | 1190 | - |
| Critical Hdwy | 4.11 | - | - | 4.13 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.227 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 641 | - | - | 667 | - | - | 28 | 41 | 291 | 29 | 41 | 271 |
| Stage 1 | - | - | - | - | - | - | 237 | 269 | - | 266 | 296 | - |
| Stage 2 | - | - | - | - | - | - | 253 | 289 | - | 233 | 263 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 641 | - | - | 667 | - | - | 19 | 36 | 291 | 26 | 36 | 271 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 19 | 36 | - | 26 | 36 | - |
| Stage 1 | - | - | - | - | - | - | 209 | 237 | - | 234 | 294 | - |
| Stage 2 | - | - | - | - | - | - | 205 | 287 | - | 202 | 231 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----------|------|
| HCM Control Delay, s | 0.8 | 0.1 | \$ 381.4 | 71.4 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|----------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 23 | 641 | - | - | 667 | - | - | 29 | 271 |
| HCM Lane V/C Ratio | 0.87 | 0.121 | - | - | 0.008 | - | - | 0.519 | 0.167 |
| HCM Control Delay (s) | \$ 381.4 | 11.4 | - | - | 10.4 | - | - | 222.7 | 20.9 |
| HCM Lane LOS | F | B | - | - | B | - | - | F | C |
| HCM 95th %tile Q(veh) | 2.6 | 0.4 | - | - | 0 | - | - | 1.7 | 0.6 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

4: E Cherokee Dr & Ranchwood Trail

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 20.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 104 | 826 | 916 | 129 | 68 | 49 |
| Future Vol, veh/h | 104 | 826 | 916 | 129 | 68 | 49 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 175 | 0 | 135 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 93 | 93 | 82 | 82 |
| Heavy Vehicles, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Mvmt Flow | 109 | 869 | 985 | 139 | 83 | 60 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 1124 | 0 | - | 0 | 2072 985 |
| Stage 1 | - | - | - | - | 985 - |
| Stage 2 | - | - | - | - | 1087 - |
| Critical Hdwy | 4.11 | - | - | - | 6.45 6.25 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.45 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.45 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.545 3.345 |
| Pot Cap-1 Maneuver | 625 | - | - | - | ~ 58 297 |
| Stage 1 | - | - | - | - | 357 - |
| Stage 2 | - | - | - | - | 319 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 625 | - | - | - | ~ 48 297 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 48 - |
| Stage 1 | - | - | - | - | 295 - |
| Stage 2 | - | - | - | - | 319 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 1.3 | 0 | \$ 319.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|----------|-------|
| Capacity (veh/h) | 625 | - | - | - | 48 | 297 |
| HCM Lane V/C Ratio | 0.175 | - | - | - | 1.728 | 0.201 |
| HCM Control Delay (s) | 12 | - | - | - | \$ 535.5 | 20.1 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.6 | - | - | - | 8.2 | 0.7 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC

5: Village Ct/Little Brook Dr & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 19 | 858 | 37 | 21 | 964 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Future Vol, veh/h | 19 | 858 | 37 | 21 | 964 | 5 | 27 | 2 | 9 | 3 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | 175 | 175 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 91 | 91 | 91 | 73 | 73 | 73 | 50 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 10 | 10 | 10 |
| Mvmt Flow | 22 | 1009 | 44 | 23 | 1059 | 5 | 37 | 3 | 12 | 6 | 0 | 14 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|------|------|
| Conflicting Flow All | 1064 | 0 | 0 | 1053 | 0 | 0 | 2168 | 2163 | 1009 | 2191 | 2205 | 1062 |
| Stage 1 | - | - | - | - | - | - | 1053 | 1053 | - | 1108 | 1108 | - |
| Stage 2 | - | - | - | - | - | - | 1115 | 1110 | - | 1083 | 1097 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.13 | 6.53 | 6.23 | 7.2 | 6.6 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.2 | 5.6 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.527 | 4.027 | 3.327 | 3.59 | 4.09 | 3.39 |
| Pot Cap-1 Maneuver | 659 | - | - | 661 | - | - | ~ 34 | 47 | 290 | 31 | 42 | 262 |
| Stage 1 | - | - | - | - | - | - | 272 | 302 | - | 246 | 276 | - |
| Stage 2 | - | - | - | - | - | - | 251 | 284 | - | 254 | 279 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 659 | - | - | 661 | - | - | ~ 31 | 44 | 290 | 27 | 39 | 262 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 31 | 44 | - | 27 | 39 | - |
| Stage 1 | - | - | - | - | - | - | 263 | 292 | - | 238 | 266 | - |
| Stage 2 | - | - | - | - | - | - | 229 | 274 | - | 233 | 270 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----------|----|
| HCM Control Delay, s | 0.2 | 0.2 | \$ 402.2 | 72 |
| HCM LOS | | | F | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|----------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 40 | 659 | - | - | 661 | - | - | 73 |
| HCM Lane V/C Ratio | 1.301 | 0.034 | - | - | 0.035 | - | - | 0.274 |
| HCM Control Delay (s) | \$ 402.2 | 10.7 | - | - | 10.6 | - | - | 72 |
| HCM Lane LOS | F | B | - | - | B | - | - | F |
| HCM 95th %tile Q(veh) | 5.2 | 0.1 | - | - | 0.1 | - | - | 1 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
6: E Cherokee Dr & Avery Creek Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 54 | 811 | 839 | 57 | 28 | 43 |
| Future Vol, veh/h | 54 | 811 | 839 | 57 | 28 | 43 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 150 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 88 | 88 | 71 | 71 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 3 | 3 |
| Mvmt Flow | 58 | 872 | 953 | 65 | 39 | 61 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 1018 | 0 | - | 0 | 1941 953 |
| Stage 1 | - | - | - | - | 953 - |
| Stage 2 | - | - | - | - | 988 - |
| Critical Hdwy | 4.11 | - | - | - | 6.43 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.527 3.327 |
| Pot Cap-1 Maneuver | 685 | - | - | - | 71 313 |
| Stage 1 | - | - | - | - | 373 - |
| Stage 2 | - | - | - | - | 359 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 685 | - | - | - | 65 313 |
| Mov Cap-2 Maneuver | - | - | - | - | 65 - |
| Stage 1 | - | - | - | - | 341 - |
| Stage 2 | - | - | - | - | 359 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 60.3 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 685 | - | - | - | 65 | 313 |
| HCM Lane V/C Ratio | 0.085 | - | - | - | 0.607 | 0.193 |
| HCM Control Delay (s) | 10.7 | - | - | - | 123.4 | 19.2 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 2.6 | 0.7 |

HCM 6th TWSC
7: Newcastle Walk & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 838 | 12 | 8 | 908 | 7 | 11 |
| Future Vol, veh/h | 838 | 12 | 8 | 908 | 7 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 135 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 87 | 87 | 50 | 50 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 901 | 13 | 9 | 1044 | 14 | 22 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 914 | 0 | 1963 |
| Stage 1 | - | - | - | - | 901 |
| Stage 2 | - | - | - | - | 1062 |
| Critical Hdwy | - | - | 4.12 | - | 6.4 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.5 |
| Pot Cap-1 Maneuver | - | - | 746 | - | 70 |
| Stage 1 | - | - | - | - | 400 |
| Stage 2 | - | - | - | - | 335 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 746 | - | 68 |
| Mov Cap-2 Maneuver | - | - | - | - | 68 |
| Stage 1 | - | - | - | - | 400 |
| Stage 2 | - | - | - | - | 325 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 41.8 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 133 | - | - | 746 | - |
| HCM Lane V/C Ratio | 0.271 | - | - | 0.012 | - |
| HCM Control Delay (s) | 41.8 | - | - | 9.9 | 0 |
| HCM Lane LOS | E | - | - | A | A |
| HCM 95th %tile Q(veh) | 1 | - | - | 0 | - |

HCM 6th TWSC
8: E Cherokee Dr & Bradshaw Club Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 58 | 789 | 847 | 44 | 43 | 64 |
| Future Vol, veh/h | 58 | 789 | 847 | 44 | 43 | 64 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | 180 | 0 | 85 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 89 | 89 | 89 | 89 | 64 | 64 |
| Heavy Vehicles, % | 1 | 1 | 2 | 2 | 1 | 1 |
| Mvmt Flow | 65 | 887 | 952 | 49 | 67 | 100 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 1001 | 0 | - | 0 | 1969 952 |
| Stage 1 | - | - | - | - | 952 - |
| Stage 2 | - | - | - | - | 1017 - |
| Critical Hdwy | 4.11 | - | - | - | 6.41 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.41 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.41 - |
| Follow-up Hdwy | 2.209 | - | - | - | 3.509 3.309 |
| Pot Cap-1 Maneuver | 696 | - | - | - | 69 316 |
| Stage 1 | - | - | - | - | 377 - |
| Stage 2 | - | - | - | - | 351 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 696 | - | - | - | ~ 63 316 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 63 - |
| Stage 1 | - | - | - | - | 342 - |
| Stage 2 | - | - | - | - | 351 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 0.7 | 0 | 110.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 696 | - | - | - | 63 | 316 |
| HCM Lane V/C Ratio | 0.094 | - | - | - | 1.066 | 0.316 |
| HCM Control Delay (s) | 10.7 | - | - | - | 243.4 | 21.6 |
| HCM Lane LOS | B | - | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 5.3 | 1.3 |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
9: Little Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 64 | 892 | 3 | 3 | 892 | 9 | 0 | 0 | 7 | 0 | 1 | 71 |
| Future Vol, veh/h | 64 | 892 | 3 | 3 | 892 | 9 | 0 | 0 | 7 | 0 | 1 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 235 | - | - | 235 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 96 | 96 | 96 | 42 | 42 | 42 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 69 | 959 | 3 | 3 | 929 | 9 | 0 | 0 | 17 | 0 | 1 | 81 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|-----|
| Conflicting Flow All | 938 | 0 | 0 | 962 | 0 | 0 | 2080 | 2043 | 961 | 2047 | 2040 | 934 |
| Stage 1 | - | - | - | - | - | - | 1099 | 1099 | - | 940 | 940 | - |
| Stage 2 | - | - | - | - | - | - | 981 | 944 | - | 1107 | 1100 | - |
| Critical Hdwy | 4.11 | - | - | 4.12 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.209 | - | - | 2.218 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 735 | - | - | 715 | - | - | 40 | 57 | 314 | 42 | 57 | 325 |
| Stage 1 | - | - | - | - | - | - | 260 | 291 | - | 319 | 345 | - |
| Stage 2 | - | - | - | - | - | - | 303 | 344 | - | 257 | 290 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 735 | - | - | 715 | - | - | 27 | 51 | 314 | 37 | 51 | 325 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 27 | 51 | - | 37 | 51 | - |
| Stage 1 | - | - | - | - | - | - | 236 | 264 | - | 289 | 344 | - |
| Stage 2 | - | - | - | - | - | - | 226 | 343 | - | 221 | 263 | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 0.7 | 0 | 17.1 | 21.3 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 314 | 735 | - | - | 715 | - | - | 302 |
| HCM Lane V/C Ratio | 0.053 | 0.094 | - | - | 0.004 | - | - | 0.271 |
| HCM Control Delay (s) | 17.1 | 10.4 | - | - | 10.1 | - | - | 21.3 |
| HCM Lane LOS | C | B | - | - | B | - | - | C |
| HCM 95th %tile Q(veh) | 0.2 | 0.3 | - | - | 0 | - | - | 1.1 |

Timings

10: E Cherokee Dr & Hickory Rd

08/17/2020

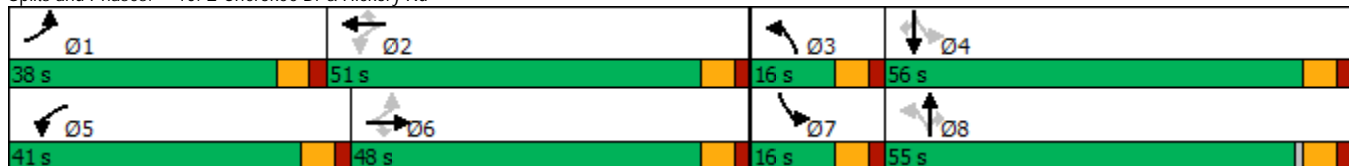


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Future Volume (vph) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 6.0 | 20.0 | 20.0 | 6.0 | 20.0 | 20.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 16.0 | 30.0 | 30.0 | 16.0 | 30.0 | 30.0 | 16.0 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 |
| Total Split (s) | 38.0 | 48.0 | 48.0 | 41.0 | 51.0 | 51.0 | 16.0 | 55.0 | 55.0 | 16.0 | 56.0 | 56.0 |
| Total Split (%) | 23.6% | 29.8% | 29.8% | 25.5% | 31.7% | 31.7% | 9.9% | 34.2% | 34.2% | 9.9% | 34.8% | 34.8% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | Max | Max |
| Act Effect Green (s) | 75.9 | 45.6 | 45.6 | 74.8 | 45.0 | 45.0 | 60.5 | 50.5 | 50.5 | 59.6 | 50.0 | 50.0 |
| Actuated g/C Ratio | 0.48 | 0.29 | 0.29 | 0.47 | 0.28 | 0.28 | 0.38 | 0.32 | 0.32 | 0.37 | 0.31 | 0.31 |
| v/c Ratio | 0.95 | 0.60 | 0.19 | 0.85 | 0.90 | 0.28 | 0.82 | 0.79 | 0.55 | 0.52 | 0.91 | 0.51 |
| Control Delay | 83.0 | 53.0 | 8.3 | 44.6 | 67.6 | 7.8 | 68.3 | 61.2 | 17.5 | 39.1 | 73.6 | 6.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 83.0 | 53.0 | 8.3 | 44.6 | 67.6 | 7.8 | 68.3 | 61.2 | 17.5 | 39.1 | 73.6 | 6.1 |
| LOS | F | D | A | D | E | A | E | E | B | D | E | A |
| Approach Delay | | 59.0 | | | 54.8 | | | 45.6 | | | 44.6 | |
| Approach LOS | | E | | | D | | | D | | | D | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 161 | |
| Actuated Cycle Length: 159.4 | |
| Natural Cycle: 110 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.95 | |
| Intersection Signal Delay: 51.5 | Intersection LOS: D |
| Intersection Capacity Utilization 93.4% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 10: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

10: E Cherokee Dr & Hickory Rd

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Future Volume (veh/h) | 324 | 545 | 89 | 368 | 843 | 149 | 126 | 434 | 344 | 97 | 479 | 346 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 364 | 612 | 0 | 396 | 906 | 0 | 137 | 472 | 374 | 108 | 532 | 384 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 | 0.92 | 0.92 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Cap, veh/h | 387 | 1037 | | 472 | 1031 | | 191 | 623 | 528 | 210 | 598 | 507 |
| Arrive On Green | 0.18 | 0.29 | 0.00 | 0.17 | 0.29 | 0.00 | 0.06 | 0.33 | 0.33 | 0.05 | 0.32 | 0.32 |
| Sat Flow, veh/h | 1781 | 3554 | 1585 | 1795 | 3582 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 364 | 612 | 0 | 396 | 906 | 0 | 137 | 472 | 374 | 108 | 532 | 384 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1777 | 1585 | 1795 | 1791 | 1598 | 1795 | 1885 | 1598 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 24.9 | 23.0 | 0.0 | 23.9 | 37.7 | 0.0 | 8.0 | 35.0 | 32.0 | 6.3 | 42.3 | 34.0 |
| Cycle Q Clear(g_c), s | 24.9 | 23.0 | 0.0 | 23.9 | 37.7 | 0.0 | 8.0 | 35.0 | 32.0 | 6.3 | 42.3 | 34.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 387 | 1037 | | 472 | 1031 | | 191 | 623 | 528 | 210 | 598 | 507 |
| V/C Ratio(X) | 0.94 | 0.59 | | 0.84 | 0.88 | | 0.72 | 0.76 | 0.71 | 0.51 | 0.89 | 0.76 |
| Avail Cap(c_a), veh/h | 439 | 1037 | | 566 | 1031 | | 191 | 623 | 528 | 229 | 598 | 507 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.3 | 47.4 | 0.0 | 32.5 | 53.1 | 0.0 | 39.3 | 46.8 | 45.8 | 37.0 | 50.6 | 47.7 |
| Incr Delay (d2), s/veh | 26.8 | 2.5 | 0.0 | 9.4 | 10.6 | 0.0 | 12.2 | 6.3 | 5.5 | 1.9 | 17.8 | 10.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.2 | 10.7 | 0.0 | 11.7 | 18.5 | 0.0 | 4.2 | 17.6 | 13.6 | 2.9 | 22.8 | 14.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 70.1 | 49.9 | 0.0 | 41.8 | 63.7 | 0.0 | 51.6 | 53.1 | 51.2 | 38.9 | 68.4 | 57.9 |
| LnGrp LOS | E | D | | D | E | | D | D | D | D | E | E |
| Approach Vol, veh/h | | 976 | A | | 1302 | A | | 983 | | | 1024 | |
| Approach Delay, s/veh | | 57.4 | | | 57.0 | | | 52.2 | | | 61.3 | |
| Approach LOS | | E | | | E | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 33.4 | 51.0 | 15.9 | 56.0 | 32.8 | 51.6 | 14.3 | 57.7 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 32.0 | 45.0 | 10.0 | 50.0 | 35.0 | 42.0 | 10.0 | 49.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 26.9 | 39.7 | 10.0 | 44.3 | 25.9 | 25.0 | 8.3 | 37.0 | | | | |
| Green Ext Time (p_c), s | 0.6 | 3.7 | 0.0 | 3.7 | 0.9 | 6.5 | 0.0 | 6.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 57.0 |
| HCM 6th LOS | E |

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
11: E Cherokee Dr & Bart Manous Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 9.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 123 | 75 | 85 | 547 | 514 | 135 |
| Future Vol, veh/h | 123 | 75 | 85 | 547 | 514 | 135 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 100 | 160 | - | - | 100 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 93 | 93 | 91 | 91 |
| Heavy Vehicles, % | 1 | 1 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 135 | 82 | 91 | 588 | 565 | 148 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1335 | 565 | 713 | 0 | 0 |
| Stage 1 | 565 | - | - | - | - |
| Stage 2 | 770 | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 170 | 526 | 896 | - | - |
| Stage 1 | 571 | - | - | - | - |
| Stage 2 | 459 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 153 | 526 | 896 | - | - |
| Mov Cap-2 Maneuver | 153 | - | - | - | - |
| Stage 1 | 513 | - | - | - | - |
| Stage 2 | 459 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 68.6 | 1.3 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 896 | - | 153 | 526 | - | - |
| HCM Lane V/C Ratio | 0.102 | - | 0.883 | 0.157 | - | - |
| HCM Control Delay (s) | 9.5 | - | 102.5 | 13.1 | - | - |
| HCM Lane LOS | A | - | F | B | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | 6.1 | 0.6 | - | - |

HCM 6th TWSC
12: E Cherokee Dr & Epperson Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 57 | 616 | 605 | 3 | 3 | 42 |
| Future Vol, veh/h | 57 | 616 | 605 | 3 | 3 | 42 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 235 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 0 | 0 |
| Mvmt Flow | 61 | 655 | 651 | 3 | 4 | 51 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|----------|
| Conflicting Flow All | 654 | 0 | - | 0 | 1430 653 |
| Stage 1 | - | - | - | - | 653 - |
| Stage 2 | - | - | - | - | 777 - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 3.3 |
| Pot Cap-1 Maneuver | 943 | - | - | - | 150 471 |
| Stage 1 | - | - | - | - | 522 - |
| Stage 2 | - | - | - | - | 457 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 943 | - | - | - | 140 471 |
| Mov Cap-2 Maneuver | - | - | - | - | 140 - |
| Stage 1 | - | - | - | - | 488 - |
| Stage 2 | - | - | - | - | 457 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.8 | 0 | 15.2 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 943 | - | - | - | 407 |
| HCM Lane V/C Ratio | 0.064 | - | - | - | 0.133 |
| HCM Control Delay (s) | 9.1 | - | - | - | 15.2 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.5 |

HCM 6th TWSC
13: E Cherokee Dr & Avery Rd/Thomas Rd

08/17/2020

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 67.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | | | ↕ | | | ↕ | ↕ |
| Traffic Vol, veh/h | 185 | 7 | 3 | 5 | 6 | 12 | 1 | 624 | 3 | 5 | 600 | 288 |
| Future Vol, veh/h | 185 | 7 | 3 | 5 | 6 | 12 | 1 | 624 | 3 | 5 | 600 | 288 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 175 | - | - | - | - | - | - | - | - | 175 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 84 | 84 | 84 | 75 | 75 | 75 | 94 | 94 | 94 | 92 | 92 | 92 |
| Heavy Vehicles, % | 8 | 8 | 8 | 7 | 7 | 7 | 0 | 0 | 0 | 2 | 2 | 2 |
| Mvmt Flow | 220 | 8 | 4 | 7 | 8 | 16 | 1 | 664 | 3 | 5 | 652 | 313 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|----------------------|--------|-------|-------|--------|-------|-------|--------|---|---|--------|---|---|
| Conflicting Flow All | 1342 | 1331 | 652 | 1493 | 1643 | 666 | 965 | 0 | 0 | 667 | 0 | 0 |
| Stage 1 | 662 | 662 | - | 668 | 668 | - | - | - | - | - | - | - |
| Stage 2 | 680 | 669 | - | 825 | 975 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.18 | 6.58 | 6.28 | 7.17 | 6.57 | 6.27 | 4.1 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.18 | 5.58 | - | 6.17 | 5.57 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.572 | 4.072 | 3.372 | 3.563 | 4.063 | 3.363 | 2.2 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | ~ 125 | 150 | 457 | 99 | 97 | 451 | 722 | - | - | 923 | - | - |
| Stage 1 | 441 | 450 | - | 439 | 449 | - | - | - | - | - | - | - |
| Stage 2 | 431 | 447 | - | 360 | 323 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | | | | | |
| Mov Cap-1 Maneuver | ~ 112 | 148 | 457 | 93 | 96 | 451 | 722 | - | - | 923 | - | - |
| Mov Cap-2 Maneuver | ~ 112 | 148 | - | 93 | 96 | - | - | - | - | - | - | - |
| Stage 1 | 440 | 444 | - | 438 | 448 | - | - | - | - | - | - | - |
| Stage 2 | 407 | 446 | - | 346 | 319 | - | - | - | - | - | - | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|--------|--|--|------|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | \$ 545 | | | 32.5 | | | 0 | | | 0 | | |
| HCM LOS | F | | | D | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|----------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 722 | - | - | 113 | 457 | 161 | 923 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 2.023 | 0.008 | 0.19 | 0.006 | - | - |
| HCM Control Delay (s) | 10 | 0 | - | \$ 553.3 | 12.9 | 32.5 | 8.9 | 0 | - |
| HCM Lane LOS | A | A | - | F | B | D | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 19 | 0 | 0.7 | 0 | - | - |

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings

14: Union Hill Rd & E Cherokee Dr

08/17/2020

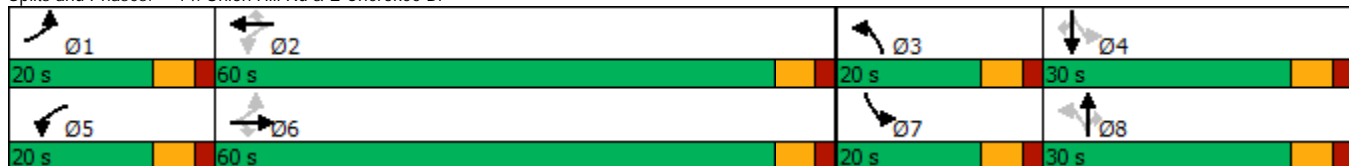


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Future Volume (vph) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 15.0 | 15.0 | 4.0 | 15.0 | 15.0 | 4.0 | 8.0 | 8.0 | 4.0 | 8.0 | 8.0 |
| Minimum Split (s) | 14.0 | 25.0 | 25.0 | 14.0 | 25.0 | 25.0 | 14.0 | 18.0 | 18.0 | 14.0 | 18.0 | 18.0 |
| Total Split (s) | 20.0 | 60.0 | 60.0 | 20.0 | 60.0 | 60.0 | 20.0 | 30.0 | 30.0 | 20.0 | 30.0 | 30.0 |
| Total Split (%) | 15.4% | 46.2% | 46.2% | 15.4% | 46.2% | 46.2% | 15.4% | 23.1% | 23.1% | 15.4% | 23.1% | 23.1% |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | None | None | None | None | None |
| Act Effect Green (s) | 68.4 | 64.3 | 64.3 | 60.3 | 54.2 | 54.2 | 34.0 | 20.0 | 20.0 | 29.4 | 17.7 | 17.7 |
| Actuated g/C Ratio | 0.58 | 0.54 | 0.54 | 0.51 | 0.46 | 0.46 | 0.29 | 0.17 | 0.17 | 0.25 | 0.15 | 0.15 |
| v/c Ratio | 0.31 | 0.65 | 0.08 | 0.06 | 0.67 | 0.11 | 0.76 | 0.78 | 0.14 | 0.50 | 0.47 | 0.40 |
| Control Delay | 14.5 | 25.8 | 0.2 | 12.9 | 31.3 | 1.6 | 48.5 | 65.6 | 0.8 | 36.7 | 51.9 | 10.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.5 | 25.8 | 0.2 | 12.9 | 31.3 | 1.6 | 48.5 | 65.6 | 0.8 | 36.7 | 51.9 | 10.4 |
| LOS | B | C | A | B | C | A | D | E | A | D | D | B |
| Approach Delay | | 22.2 | | | 27.0 | | | 51.6 | | | 32.3 | |
| Approach LOS | | C | | | C | | | D | | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 130 | |
| Actuated Cycle Length: 118.8 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.78 | |
| Intersection Signal Delay: 32.0 | Intersection LOS: C |
| Intersection Capacity Utilization 76.5% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 14: Union Hill Rd & E Cherokee Dr



HCM 6th Signalized Intersection Summary

14: Union Hill Rd & E Cherokee Dr

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Future Volume (veh/h) | 100 | 616 | 65 | 16 | 508 | 78 | 255 | 222 | 46 | 107 | 106 | 117 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 108 | 662 | 0 | 18 | 577 | 0 | 283 | 247 | 0 | 134 | 132 | 0 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.90 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cap, veh/h | 384 | 995 | | 308 | 943 | | 348 | 288 | | 244 | 202 | |
| Arrive On Green | 0.05 | 0.53 | 0.00 | 0.02 | 0.50 | 0.00 | 0.13 | 0.15 | 0.00 | 0.08 | 0.11 | 0.00 |
| Sat Flow, veh/h | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 108 | 662 | 0 | 18 | 577 | 0 | 283 | 247 | 0 | 134 | 132 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1885 | 1598 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 3.2 | 27.8 | 0.0 | 0.5 | 23.9 | 0.0 | 14.0 | 13.9 | 0.0 | 7.1 | 7.3 | 0.0 |
| Cycle Q Clear(g_c), s | 3.2 | 27.8 | 0.0 | 0.5 | 23.9 | 0.0 | 14.0 | 13.9 | 0.0 | 7.1 | 7.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 384 | 995 | | 308 | 943 | | 348 | 288 | | 244 | 202 | |
| V/C Ratio(X) | 0.28 | 0.67 | | 0.06 | 0.61 | | 0.81 | 0.86 | | 0.55 | 0.65 | |
| Avail Cap(c_a), veh/h | 530 | 995 | | 513 | 943 | | 348 | 416 | | 326 | 416 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 15.1 | 18.7 | 0.0 | 15.9 | 19.8 | 0.0 | 38.0 | 44.9 | 0.0 | 38.9 | 46.6 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 3.5 | 0.0 | 0.1 | 3.0 | 0.0 | 13.7 | 11.6 | 0.0 | 1.9 | 3.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 11.9 | 0.0 | 0.2 | 10.4 | 0.0 | 7.8 | 7.2 | 0.0 | 3.2 | 3.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.5 | 22.2 | 0.0 | 16.0 | 22.8 | 0.0 | 51.6 | 56.5 | 0.0 | 40.8 | 50.1 | 0.0 |
| LnGrp LOS | B | C | | B | C | | D | E | | D | D | |
| Approach Vol, veh/h | | 770 | A | | 595 | A | | 530 | A | | 266 | A |
| Approach Delay, s/veh | | 21.3 | | | 22.6 | | | 53.9 | | | 45.4 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.1 | 60.0 | 20.0 | 17.7 | 7.7 | 63.4 | 15.1 | 22.6 | | | | |
| Change Period (Y+Rc), s | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | | |
| Max Green Setting (Gmax), s | 14.0 | 54.0 | 14.0 | 24.0 | 14.0 | 54.0 | 14.0 | 24.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 5.2 | 25.9 | 16.0 | 9.3 | 2.5 | 29.8 | 9.1 | 15.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.6 | 0.0 | 0.5 | 0.0 | 4.2 | 0.1 | 0.7 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|--|--|------|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay | | | 32.6 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
15: E Cherokee Dr & Johnson Brady Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 7 | 15 | 17 | 678 | 541 | 6 |
| Future Vol, veh/h | 7 | 15 | 17 | 678 | 541 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 54 | 54 | 86 | 86 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 13 | 28 | 20 | 788 | 660 | 7 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1492 | 664 | 667 | 0 | 0 |
| Stage 1 | 664 | - | - | - | - |
| Stage 2 | 828 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 137 | 464 | 932 | - | - |
| Stage 1 | 516 | - | - | - | - |
| Stage 2 | 432 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 134 | 464 | 932 | - | - |
| Mov Cap-2 Maneuver | 134 | - | - | - | - |
| Stage 1 | 505 | - | - | - | - |
| Stage 2 | 432 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.4 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 932 | - | 260 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.157 | - | - |
| HCM Control Delay (s) | 8.9 | - | 21.4 | - | - |
| HCM Lane LOS | A | - | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.5 | - | - |

HCM 6th TWSC
16: E Cherokee Dr & Beavers Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | W | U | U | W |
| Traffic Vol, veh/h | 46 | 14 | 17 | 635 | 542 | 36 |
| Future Vol, veh/h | 46 | 14 | 17 | 635 | 542 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | 175 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 56 | 56 | 89 | 89 | 84 | 84 |
| Heavy Vehicles, % | 3 | 3 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 82 | 25 | 19 | 713 | 645 | 43 |

| Major/Minor | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1396 | 645 | 688 | 0 | 0 |
| Stage 1 | 645 | - | - | - | - |
| Stage 2 | 751 | - | - | - | - |
| Critical Hdwy | 6.43 | 6.23 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.43 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.43 | - | - | - | - |
| Follow-up Hdwy | 3.527 | 3.327 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 155 | 470 | 916 | - | - |
| Stage 1 | 520 | - | - | - | - |
| Stage 2 | 464 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 152 | 470 | 916 | - | - |
| Mov Cap-2 Maneuver | 152 | - | - | - | - |
| Stage 1 | 509 | - | - | - | - |
| Stage 2 | 464 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 50.8 | 0.2 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 916 | - | 180 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.595 | - | - |
| HCM Control Delay (s) | 9 | - | 50.8 | - | - |
| HCM Lane LOS | A | - | F | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.3 | - | - |

HCM 6th TWSC
17: Haley Farm Rd & E Cherokee Dr

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 630 | 48 | 6 | 545 | 43 | 9 |
| Future Vol, veh/h | 630 | 48 | 6 | 545 | 43 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 175 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 83 | 83 | 51 | 51 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 733 | 56 | 7 | 657 | 84 | 18 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 789 | 0 | 1404 |
| Stage 1 | - | - | - | - | 733 |
| Stage 2 | - | - | - | - | 671 |
| Critical Hdwy | - | - | 4.1 | - | 6.4 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 |
| Pot Cap-1 Maneuver | - | - | 840 | - | 155 |
| Stage 1 | - | - | - | - | 479 |
| Stage 2 | - | - | - | - | 512 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 840 | - | 153 |
| Mov Cap-2 Maneuver | - | - | - | - | 153 |
| Stage 1 | - | - | - | - | 479 |
| Stage 2 | - | - | - | - | 505 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.1 | 52.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 172 | - | - | 840 | - |
| HCM Lane V/C Ratio | 0.593 | - | - | 0.009 | - |
| HCM Control Delay (s) | 52.5 | - | - | 9.3 | 0 |
| HCM Lane LOS | F | - | - | A | A |
| HCM 95th %tile Q(veh) | 3.2 | - | - | 0 | - |

HCM 6th TWSC
18: E Cherokee Dr & Water Tank Rd

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 21 | 71 | 12 | 829 | 612 | 12 |
| Future Vol, veh/h | 21 | 71 | 12 | 829 | 612 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 235 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 84 | 84 | 92 | 92 |
| Heavy Vehicles, % | 10 | 10 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 23 | 78 | 14 | 987 | 665 | 13 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1687 | 672 | 678 | 0 | 0 |
| Stage 1 | 672 | - | - | - | - |
| Stage 2 | 1015 | - | - | - | - |
| Critical Hdwy | 6.5 | 6.3 | 4.11 | - | - |
| Critical Hdwy Stg 1 | 5.5 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.5 | - | - | - | - |
| Follow-up Hdwy | 3.59 | 3.39 | 2.209 | - | - |
| Pot Cap-1 Maneuver | 99 | 442 | 919 | - | - |
| Stage 1 | 493 | - | - | - | - |
| Stage 2 | 338 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 98 | 442 | 919 | - | - |
| Mov Cap-2 Maneuver | 98 | - | - | - | - |
| Stage 1 | 486 | - | - | - | - |
| Stage 2 | 338 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 29.6 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 919 | - | 245 | - | - |
| HCM Lane V/C Ratio | 0.016 | - | 0.413 | - | - |
| HCM Control Delay (s) | 9 | - | 29.6 | - | - |
| HCM Lane LOS | A | - | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.9 | - | - |

HCM 6th TWSC
 19: E Cherokee Dr & Macedonia Elementary

08/17/2020

| Intersection | | | | | | |
|--------------------------|------|-------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 37 | 776 | 40 | 25 | 595 |
| Future Vol, veh/h | 17 | 37 | 776 | 40 | 25 | 595 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | Yield | - | None | - | None |
| Storage Length | 0 | 0 | - | 200 | 235 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 71 | 71 | 88 | 88 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 6 | 6 | 6 | 6 |
| Mvmt Flow | 24 | 52 | 882 | 45 | 27 | 654 |

| Major/Minor | Minor1 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1590 | 882 | 0 | 0 | 927 |
| Stage 1 | 882 | - | - | - | - |
| Stage 2 | 708 | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.16 |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | - | - | 2.254 |
| Pot Cap-1 Maneuver | 120 | 348 | - | - | 721 |
| Stage 1 | 408 | - | - | - | - |
| Stage 2 | 492 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 116 | 348 | - | - | 721 |
| Mov Cap-2 Maneuver | 116 | - | - | - | - |
| Stage 1 | 408 | - | - | - | - |
| Stage 2 | 474 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 25.6 | 0 | 0.4 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 116 | 348 | 721 | - |
| HCM Lane V/C Ratio | - | - | 0.206 | 0.15 | 0.038 | - |
| HCM Control Delay (s) | - | - | 43.9 | 17.2 | 10.2 | - |
| HCM Lane LOS | - | - | E | C | B | - |
| HCM 95th %tile Q(veh) | - | - | 0.7 | 0.5 | 0.1 | - |

Timings

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020

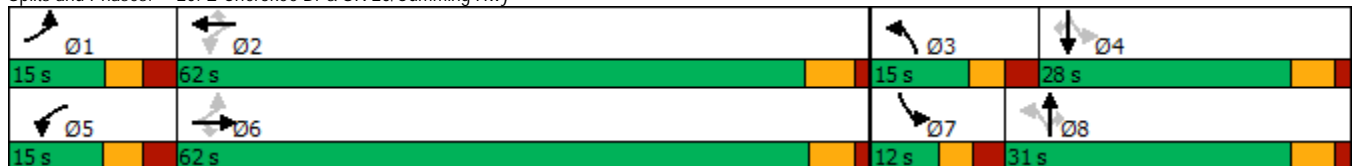


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Future Volume (vph) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 6 | | 6 | 2 | | 2 | 8 | | 8 | 4 | | 4 |
| Detector Phase | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 15.0 | 15.0 | 8.0 | 15.0 | 15.0 | 6.0 | 8.0 | 8.0 | 6.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 25.0 | 15.0 | 18.0 | 18.0 | 12.0 | 18.0 | 18.0 |
| Total Split (s) | 15.0 | 62.0 | 62.0 | 15.0 | 62.0 | 62.0 | 15.0 | 31.0 | 31.0 | 12.0 | 28.0 | 28.0 |
| Total Split (%) | 12.5% | 51.7% | 51.7% | 12.5% | 51.7% | 51.7% | 12.5% | 25.8% | 25.8% | 10.0% | 23.3% | 23.3% |
| Yellow Time (s) | 3.4 | 4.0 | 4.0 | 3.6 | 4.4 | 4.4 | 3.2 | 4.0 | 4.0 | 3.0 | 4.0 | 4.0 |
| All-Red Time (s) | 3.0 | 1.5 | 1.5 | 3.0 | 1.5 | 1.5 | 3.0 | 1.6 | 1.6 | 3.0 | 1.6 | 1.6 |
| 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) | 6.4 | 5.5 | 5.5 | 6.6 | 5.9 | 5.9 | 6.2 | 5.6 | 5.6 | 6.0 | 5.6 | 5.6 |
| 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 |
| Recall Mode | None | Max | Max | None | Max | Max | None | Max | Max | None | Max | Max |
| Act Effect Green (s) | 63.8 | 56.5 | 56.5 | 65.4 | 59.4 | 59.4 | 33.6 | 25.4 | 25.4 | 28.0 | 22.4 | 22.4 |
| Actuated g/C Ratio | 0.53 | 0.47 | 0.47 | 0.54 | 0.50 | 0.50 | 0.28 | 0.21 | 0.21 | 0.23 | 0.19 | 0.19 |
| v/c Ratio | 0.21 | 0.41 | 0.21 | 0.60 | 0.40 | 0.19 | 1.22 | 0.79 | 0.50 | 1.42 | 0.80 | 0.25 |
| Control Delay | 12.4 | 21.5 | 3.3 | 21.1 | 20.3 | 3.3 | 166.0 | 60.2 | 14.3 | 248.2 | 64.9 | 4.0 |
| 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 | 12.4 | 21.5 | 3.3 | 21.1 | 20.3 | 3.3 | 166.0 | 60.2 | 14.3 | 248.2 | 64.9 | 4.0 |
| LOS | B | C | A | C | C | A | F | E | B | F | E | A |
| Approach Delay | | 18.4 | | | 18.4 | | | 80.8 | | | 128.3 | |
| Approach LOS | | B | | | B | | | F | | | F | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 1.42 | |
| Intersection Signal Delay: 49.1 | Intersection LOS: D |
| Intersection Capacity Utilization 72.8% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 20: E Cherokee Dr & SR 20/Cumming Hwy



HCM 6th Signalized Intersection Summary

20: E Cherokee Dr & SR 20/Cumming Hwy

08/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-------|-------|------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Future Volume (veh/h) | 65 | 905 | 160 | 174 | 876 | 143 | 227 | 270 | 207 | 212 | 234 | 85 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1826 | 1811 | 1811 | 1811 | 1900 | 1900 | 1900 | 1885 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 68 | 953 | 0 | 191 | 963 | 0 | 267 | 318 | 244 | 255 | 282 | 102 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.85 | 0.85 | 0.85 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 5 | 5 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 1 | 1 | 1 |
| Cap, veh/h | 366 | 2339 | | 376 | 2379 | | 236 | 401 | 340 | 194 | 351 | 297 |
| Arrive On Green | 0.06 | 0.47 | 0.00 | 0.07 | 0.48 | 0.00 | 0.07 | 0.21 | 0.21 | 0.05 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1739 | 4985 | 1547 | 1725 | 4944 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Grp Volume(v), veh/h | 68 | 953 | 0 | 191 | 963 | 0 | 267 | 318 | 244 | 255 | 282 | 102 |
| Grp Sat Flow(s),veh/h/ln | 1739 | 1662 | 1547 | 1725 | 1648 | 1535 | 1810 | 1900 | 1610 | 1795 | 1885 | 1598 |
| Q Serve(g_s), s | 2.3 | 15.1 | 0.0 | 6.9 | 15.1 | 0.0 | 8.8 | 19.1 | 17.0 | 6.0 | 17.2 | 6.7 |
| Cycle Q Clear(g_c), s | 2.3 | 15.1 | 0.0 | 6.9 | 15.1 | 0.0 | 8.8 | 19.1 | 17.0 | 6.0 | 17.2 | 6.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 366 | 2339 | | 376 | 2379 | | 236 | 401 | 340 | 194 | 351 | 297 |
| V/C Ratio(X) | 0.19 | 0.41 | | 0.51 | 0.40 | | 1.13 | 0.79 | 0.72 | 1.31 | 0.80 | 0.34 |
| Avail Cap(c_a), veh/h | 386 | 2339 | | 376 | 2379 | | 236 | 401 | 340 | 194 | 351 | 297 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.8 | 21.0 | 0.0 | 15.8 | 20.1 | 0.0 | 44.7 | 45.0 | 44.2 | 47.8 | 46.9 | 42.6 |
| Incr Delay (d2), s/veh | 0.2 | 0.5 | 0.0 | 1.1 | 0.5 | 0.0 | 99.3 | 14.9 | 12.3 | 173.1 | 17.6 | 3.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 5.7 | 0.0 | 2.6 | 5.6 | 0.0 | 9.1 | 10.4 | 7.7 | 12.1 | 9.6 | 2.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 15.0 | 21.5 | 0.0 | 16.9 | 20.6 | 0.0 | 144.0 | 59.9 | 56.5 | 220.9 | 64.5 | 45.7 |
| LnGrp LOS | B | C | | B | C | | F | E | E | F | E | D |
| Approach Vol, veh/h | | 1021 | A | | 1154 | A | | 829 | | | 639 | |
| Approach Delay, s/veh | | 21.1 | | | 20.0 | | | 86.0 | | | 123.9 | |
| Approach LOS | | C | | | C | | | F | | | F | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.6 | 63.8 | 15.0 | 28.0 | 15.0 | 62.4 | 12.0 | 31.0 | | | | |
| Change Period (Y+Rc), s | 6.4 | 5.9 | * 6.2 | * 5.6 | 6.6 | * 5.9 | 6.0 | * 5.6 | | | | |
| Max Green Setting (Gmax), s | 8.6 | 56.1 | * 8.8 | * 22 | 8.4 | * 57 | 6.0 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 17.1 | 10.8 | 19.2 | 8.9 | 17.1 | 8.0 | 21.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.4 | 0.0 | 0.6 | 0.0 | 7.3 | 0.0 | 1.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 53.5 |
| HCM 6th LOS | D |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | EB | EB | EB | EB | WB | WB | WB | B69 | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | T | T | T | L | L | TR | L |
| Maximum Queue (ft) | 364 | 977 | 940 | 940 | 195 | 491 | 430 | 20 | 150 | 175 | 647 | 44 |
| Average Queue (ft) | 93 | 941 | 934 | 914 | 144 | 222 | 232 | 1 | 147 | 174 | 624 | 8 |
| 95th Queue (ft) | 350 | 972 | 982 | 1127 | 227 | 361 | 345 | 7 | 155 | 177 | 635 | 29 |
| Link Distance (ft) | | 925 | 925 | 925 | | 433 | 433 | 226 | | | | 608 |
| Upstream Blk Time (%) | | 87 | 76 | 41 | | 0 | 0 | | | | | 78 |
| Queuing Penalty (veh) | | 0 | 0 | 0 | | 2 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 315 | | | | 145 | | | | 125 | 125 | | 135 |
| Storage Blk Time (%) | | 91 | | | 8 | 17 | 1 | | 55 | 76 | | |
| Queuing Penalty (veh) | | 18 | | | 40 | 27 | 0 | | 123 | 169 | | |

Intersection: 1: Mill Creek Rd/Johnston Elementary School & E Cherokee Dr

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | R |
| Maximum Queue (ft) | 39 | 17 |
| Average Queue (ft) | 4 | 7 |
| 95th Queue (ft) | 20 | 20 |
| Link Distance (ft) | 132 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 135 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 2: E Cherokee Dr & Copper Ridge Dr

| Movement | EB | B69 | B69 | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | T | | LR |
| Maximum Queue (ft) | 53 | 488 | 454 | 51 |
| Average Queue (ft) | 14 | 100 | 62 | 22 |
| 95th Queue (ft) | 42 | 415 | 313 | 46 |
| Link Distance (ft) | | 433 | 433 | 350 |
| Upstream Blk Time (%) | | 1 | 0 | |
| Queuing Penalty (veh) | | 9 | 2 | |
| Storage Bay Dist (ft) | 235 | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: Thornwood Dr/S Holly Springs Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|----|
| Directions Served | L | L | LTR | LT | R |
| Maximum Queue (ft) | 51 | 18 | 22 | 27 | 48 |
| Average Queue (ft) | 17 | 1 | 8 | 12 | 23 |
| 95th Queue (ft) | 39 | 6 | 24 | 32 | 39 |
| Link Distance (ft) | | | 511 | 805 | |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | | 75 |
| Storage Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 74 | 53 | 114 | 40 |
| Average Queue (ft) | 34 | 6 | 48 | 16 |
| 95th Queue (ft) | 60 | 26 | 88 | 34 |
| Link Distance (ft) | | | 636 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | 135 |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 5: Village Ct/Little Brook Dr & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 12 | 25 | 44 | 24 |
| Average Queue (ft) | 3 | 7 | 19 | 4 |
| 95th Queue (ft) | 10 | 24 | 41 | 19 |
| Link Distance (ft) | | | 532 | 436 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 175 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 6: E Cherokee Dr & Avery Creek Dr

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 53 | 23 | 81 | 67 |
| Average Queue (ft) | 21 | 1 | 23 | 13 |
| 95th Queue (ft) | 51 | 8 | 54 | 35 |
| Link Distance (ft) | | | 272 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 150 | | 85 |
| Storage Blk Time (%) | | | 2 | 0 |
| Queuing Penalty (veh) | | | 1 | 0 |

Intersection: 7: Newcastle Walk & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|------|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 136 | 46 |
| Average Queue (ft) | 17 | 12 |
| 95th Queue (ft) | 71 | 35 |
| Link Distance (ft) | 2496 | 594 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: E Cherokee Dr & Bradshaw Club Dr

| Movement | EB | SB | SB |
|-----------------------|-----|-----|----|
| Directions Served | L | L | R |
| Maximum Queue (ft) | 51 | 94 | 74 |
| Average Queue (ft) | 20 | 41 | 32 |
| 95th Queue (ft) | 45 | 74 | 52 |
| Link Distance (ft) | | 464 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 235 | | 85 |
| Storage Blk Time (%) | | 1 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |

Intersection: 9: Little Rd & E Cherokee Dr

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 63 | 22 | 21 | 90 |
| Average Queue (ft) | 18 | 1 | 7 | 38 |
| 95th Queue (ft) | 47 | 7 | 23 | 74 |
| Link Distance (ft) | | | 630 | 204 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 235 | 235 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|------|
| Directions Served | L | T | T | L | T | T | R | L | T | R | L | T |
| Maximum Queue (ft) | 380 | 307 | 327 | 350 | 479 | 411 | 393 | 225 | 521 | 220 | 170 | 1214 |
| Average Queue (ft) | 217 | 209 | 208 | 278 | 336 | 310 | 28 | 145 | 259 | 86 | 108 | 645 |
| 95th Queue (ft) | 357 | 291 | 300 | 417 | 457 | 393 | 195 | 261 | 423 | 159 | 201 | 1017 |
| Link Distance (ft) | | 905 | 905 | | 679 | 679 | | | 2398 | | | 1364 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 335 | | | 300 | | | 350 | 150 | | 220 | 100 | |
| Storage Blk Time (%) | 2 | | 0 | 4 | 13 | 3 | | 6 | 28 | 0 | 7 | 63 |
| Queuing Penalty (veh) | 5 | | 0 | 16 | 49 | 5 | | 45 | 132 | 1 | 55 | 278 |

Intersection: 10: E Cherokee Dr & Hickory Rd

| Movement | SB |
|-----------------------|-----|
| Directions Served | R |
| Maximum Queue (ft) | 525 |
| Average Queue (ft) | 350 |
| 95th Queue (ft) | 664 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 475 |
| Storage Blk Time (%) | 0 |
| Queuing Penalty (veh) | 2 |

Intersection: 11: E Cherokee Dr & Bart Manous Rd

| Movement | EB | EB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | R | L | R |
| Maximum Queue (ft) | 250 | 200 | 74 | 41 |
| Average Queue (ft) | 60 | 7 | 33 | 2 |
| 95th Queue (ft) | 146 | 68 | 66 | 16 |
| Link Distance (ft) | 350 | | | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 100 | 160 | 100 |
| Storage Blk Time (%) | 5 | | | |
| Queuing Penalty (veh) | 4 | | | |

Intersection: 12: E Cherokee Dr & Epperson Rd

| Movement | EB | SB |
|-----------------------|-----|----|
| Directions Served | L | LR |
| Maximum Queue (ft) | 53 | 23 |
| Average Queue (ft) | 20 | 17 |
| 95th Queue (ft) | 43 | 32 |
| Link Distance (ft) | 759 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 13: E Cherokee Dr & Avery Rd/Thomas Rd

| Movement | EB | EB | WB | SB |
|-----------------------|-----|-----|-----|------|
| Directions Served | LT | R | LTR | LT |
| Maximum Queue (ft) | 342 | 10 | 79 | 21 |
| Average Queue (ft) | 127 | 1 | 25 | 1 |
| 95th Queue (ft) | 268 | 5 | 53 | 7 |
| Link Distance (ft) | 599 | | 581 | 3756 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 175 | | |
| Storage Blk Time (%) | 13 | | | |
| Queuing Penalty (veh) | 0 | | | |

Intersection: 14: Union Hill Rd & E Cherokee Dr

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | SB | SB |
|-----------------------|------|-----|-----|-----|------|-----|-----|-----|-----|-----|
| Directions Served | L | T | R | L | T | R | L | T | L | T |
| Maximum Queue (ft) | 225 | 430 | 225 | 50 | 352 | 245 | 234 | 347 | 134 | 219 |
| Average Queue (ft) | 69 | 227 | 47 | 14 | 192 | 26 | 158 | 162 | 68 | 94 |
| 95th Queue (ft) | 161 | 361 | 197 | 40 | 309 | 151 | 231 | 273 | 122 | 165 |
| Link Distance (ft) | 3756 | | | | 1100 | | | | 702 | |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 175 | 175 | | 195 | 195 | | 185 | 190 | | |
| Storage Blk Time (%) | 12 | | | | 7 | | 4 | 4 | | 1 |
| Queuing Penalty (veh) | 20 | | | | 7 | | 10 | 13 | | 2 |

Intersection: 15: E Cherokee Dr & Johnson Brady Rd

| Movement | EB | NB |
|-----------------------|-----|----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 53 | 53 |
| Average Queue (ft) | 19 | 5 |
| 95th Queue (ft) | 49 | 26 |
| Link Distance (ft) | 390 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: E Cherokee Dr & Beavers Rd

| Movement | EB | NB |
|-----------------------|-----|----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 72 | 28 |
| Average Queue (ft) | 31 | 4 |
| 95th Queue (ft) | 57 | 19 |
| Link Distance (ft) | 611 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 235 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 17: Haley Farm Rd & E Cherokee Dr

| Movement | WB | NB |
|-----------------------|-----|-----|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 94 | 88 |
| Average Queue (ft) | 5 | 37 |
| 95th Queue (ft) | 36 | 73 |
| Link Distance (ft) | 784 | 510 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 18: E Cherokee Dr & Water Tank Rd

| Movement | EB | NB |
|-----------------------|-----|-----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 119 | 31 |
| Average Queue (ft) | 52 | 4 |
| 95th Queue (ft) | 95 | 21 |
| Link Distance (ft) | 657 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 235 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 19: E Cherokee Dr & Macedonia Elementary

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | L | L |
| Maximum Queue (ft) | 42 | 29 |
| Average Queue (ft) | 11 | 12 |
| 95th Queue (ft) | 29 | 34 |
| Link Distance (ft) | 478 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 235 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|
| Directions Served | L | T | T | T | L | T | T | T | L | T | R | L |
| Maximum Queue (ft) | 70 | 300 | 287 | 185 | 157 | 228 | 184 | 179 | 279 | 290 | 91 | 270 |
| Average Queue (ft) | 30 | 209 | 161 | 58 | 86 | 148 | 125 | 63 | 155 | 179 | 47 | 269 |
| 95th Queue (ft) | 61 | 281 | 242 | 144 | 150 | 205 | 193 | 145 | 253 | 271 | 77 | 270 |
| Link Distance (ft) | | 714 | 714 | 714 | | 1292 | 1292 | 1292 | | 592 | | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | 500 | | | | 230 | | 550 | 220 |
| Storage Blk Time (%) | | 3 | | | | | | | 2 | 3 | | 95 |
| Queuing Penalty (veh) | | 2 | | | | | | | 11 | 15 | | 303 |

Intersection: 20: E Cherokee Dr & SR 20/Cumming Hwy

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | R |
| Maximum Queue (ft) | 801 | 270 |
| Average Queue (ft) | 723 | 79 |
| 95th Queue (ft) | 892 | 246 |
| Link Distance (ft) | 762 | |
| Upstream Blk Time (%) | 52 | |
| Queuing Penalty (veh) | 0 | |
| Storage Bay Dist (ft) | | 220 |
| Storage Blk Time (%) | 8 | |
| Queuing Penalty (veh) | 24 | |

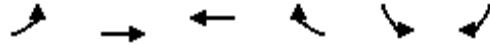
Network Summary

| |
|------------------------------------|
| Network wide Queuing Penalty: 1392 |
|------------------------------------|

Timings

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 26 | 665 | 795 | 52 | 218 | 65 |
| Future Volume (vph) | 26 | 665 | 795 | 52 | 218 | 65 |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 60.0 | 60.0 | 60.0 | 60.0 | 30.0 | 30.0 |
| Total Split (%) | 66.7% | 66.7% | 66.7% | 66.7% | 33.3% | 33.3% |
| 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? | | | | | | |
| Recall Mode | Min | Min | Min | Min | Min | Min |
| Act Effct Green (s) | 36.0 | 36.0 | 36.0 | 36.0 | 15.4 | 15.4 |
| Actuated g/C Ratio | 0.56 | 0.56 | 0.56 | 0.56 | 0.24 | 0.24 |
| v/c Ratio | 0.19 | 0.70 | 0.84 | 0.06 | 0.60 | 0.17 |
| Control Delay | 11.2 | 14.8 | 20.6 | 2.7 | 31.0 | 7.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.2 | 14.8 | 20.6 | 2.7 | 31.0 | 7.7 |
| LOS | B | B | C | A | C | A |
| Approach Delay | | 14.6 | 19.5 | | 25.6 | |
| Approach LOS | | B | B | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 90 | |
| Actuated Cycle Length: 64.4 | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.84 | |
| Intersection Signal Delay: 18.7 | Intersection LOS: B |
| Intersection Capacity Utilization 63.9% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 4: E Cherokee Dr & Ranchwood Trail



HCM 6th Signalized Intersection Summary

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 26 | 665 | 795 | 52 | 218 | 65 |
| Future Volume (veh/h) | 26 | 665 | 795 | 52 | 218 | 65 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | No | | No | |
| Adj Sat Flow, veh/h/ln | 1826 | 1826 | 1885 | 1885 | 1856 | 1856 |
| Adj Flow Rate, veh/h | 28 | 707 | 883 | 58 | 251 | 75 |
| Peak Hour Factor | 0.94 | 0.94 | 0.90 | 0.90 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 5 | 5 | 1 | 1 | 3 | 3 |
| Cap, veh/h | 253 | 1037 | 1071 | 907 | 338 | 301 |
| Arrive On Green | 0.57 | 0.57 | 0.57 | 0.57 | 0.19 | 0.19 |
| Sat Flow, veh/h | 581 | 1826 | 1885 | 1598 | 1767 | 1572 |
| Grp Volume(v), veh/h | 28 | 707 | 883 | 58 | 251 | 75 |
| Grp Sat Flow(s),veh/h/ln | 581 | 1826 | 1885 | 1598 | 1767 | 1572 |
| Q Serve(g_s), s | 2.1 | 13.6 | 19.0 | 0.8 | 6.7 | 2.0 |
| Cycle Q Clear(g_c), s | 21.0 | 13.6 | 19.0 | 0.8 | 6.7 | 2.0 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 253 | 1037 | 1071 | 907 | 338 | 301 |
| V/C Ratio(X) | 0.11 | 0.68 | 0.82 | 0.06 | 0.74 | 0.25 |
| Avail Cap(c_a), veh/h | 553 | 1977 | 2041 | 1730 | 850 | 757 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 17.3 | 7.6 | 8.8 | 4.8 | 19.0 | 17.1 |
| Incr Delay (d2), s/veh | 0.2 | 0.8 | 1.7 | 0.0 | 3.2 | 0.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.2 | 3.0 | 4.5 | 0.2 | 2.7 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 17.5 | 8.4 | 10.4 | 4.9 | 22.2 | 17.5 |
| LnGrp LOS | B | A | B | A | C | B |
| Approach Vol, veh/h | | 735 | 941 | | 326 | |
| Approach Delay, s/veh | | 8.7 | 10.1 | | 21.1 | |
| Approach LOS | | A | B | | C | |
| Timer - Assigned Phs | | | | 4 | 6 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 34.3 | 15.5 | 34.3 |
| Change Period (Y+Rc), s | | | | 6.0 | 6.0 | 6.0 |
| Max Green Setting (Gmax), s | | | | 54.0 | 24.0 | 54.0 |
| Max Q Clear Time (g_c+I1), s | | | | 23.0 | 8.7 | 21.0 |
| Green Ext Time (p_c), s | | | | 5.3 | 0.9 | 7.3 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 11.4 | | | |
| HCM 6th LOS | | | B | | | |

Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | EB | WB | WB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | R |
| Maximum Queue (ft) | 330 | 334 | 343 | 54 | 164 | 62 |
| Average Queue (ft) | 23 | 136 | 157 | 15 | 88 | 26 |
| 95th Queue (ft) | 54 | 245 | 276 | 42 | 138 | 54 |
| Link Distance (ft) | | 3832 | 566 | | 636 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 235 | | | 175 | | 135 |
| Storage Blk Time (%) | | 1 | 3 | | 2 | |
| Queuing Penalty (veh) | | 0 | 2 | | 1 | |

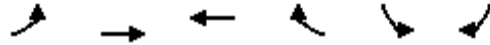
Zone Summary

Zone wide Queuing Penalty: 3

Timings

4: E Cherokee Dr & Ranchwood Trail

09/24/2020

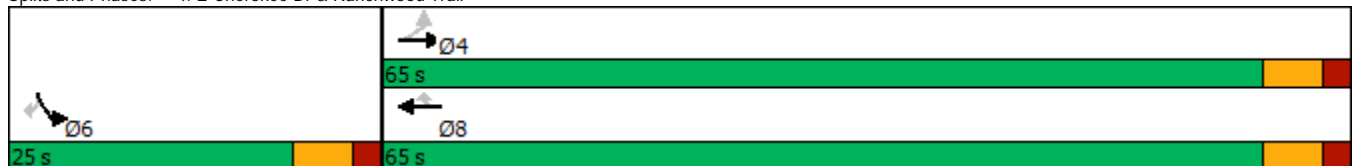


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 104 | 826 | 916 | 129 | 68 | 49 |
| Future Volume (vph) | 104 | 826 | 916 | 129 | 68 | 49 |
| Turn Type | Perm | NA | NA | Perm | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 65.0 | 65.0 | 65.0 | 65.0 | 25.0 | 25.0 |
| Total Split (%) | 72.2% | 72.2% | 72.2% | 72.2% | 27.8% | 27.8% |
| 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? | | | | | | |
| Recall Mode | None | None | None | None | Min | Min |
| Act Effct Green (s) | 38.1 | 38.1 | 38.1 | 38.1 | 9.0 | 9.0 |
| Actuated g/C Ratio | 0.64 | 0.64 | 0.64 | 0.64 | 0.15 | 0.15 |
| v/c Ratio | 0.61 | 0.73 | 0.84 | 0.13 | 0.32 | 0.21 |
| Control Delay | 23.2 | 11.2 | 16.0 | 1.3 | 30.8 | 11.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 23.2 | 11.2 | 16.0 | 1.3 | 30.8 | 11.1 |
| LOS | C | B | B | A | C | B |
| Approach Delay | | 12.5 | 14.2 | | 22.5 | |
| Approach LOS | | B | B | | C | |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 90 | |
| Actuated Cycle Length: 60 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.84 | |
| Intersection Signal Delay: 14.0 | Intersection LOS: B |
| Intersection Capacity Utilization 73.1% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 4: E Cherokee Dr & Ranchwood Trail



HCM 6th Signalized Intersection Summary

4: E Cherokee Dr & Ranchwood Trail

09/24/2020



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 104 | 826 | 916 | 129 | 68 | 49 |
| Future Volume (veh/h) | 104 | 826 | 916 | 129 | 68 | 49 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | No | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1856 | 1856 | 1826 | 1826 |
| Adj Flow Rate, veh/h | 109 | 869 | 985 | 139 | 83 | 60 |
| Peak Hour Factor | 0.95 | 0.95 | 0.93 | 0.93 | 0.82 | 0.82 |
| Percent Heavy Veh, % | 1 | 1 | 3 | 3 | 5 | 5 |
| Cap, veh/h | 309 | 1319 | 1298 | 1100 | 154 | 137 |
| Arrive On Green | 0.70 | 0.70 | 0.70 | 0.70 | 0.09 | 0.09 |
| Sat Flow, veh/h | 505 | 1885 | 1856 | 1572 | 1739 | 1547 |
| Grp Volume(v), veh/h | 109 | 869 | 985 | 139 | 83 | 60 |
| Grp Sat Flow(s),veh/h/ln | 505 | 1885 | 1856 | 1572 | 1739 | 1547 |
| Q Serve(g_s), s | 10.0 | 14.5 | 19.2 | 1.6 | 2.6 | 2.1 |
| Cycle Q Clear(g_c), s | 29.2 | 14.5 | 19.2 | 1.6 | 2.6 | 2.1 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 309 | 1319 | 1298 | 1100 | 154 | 137 |
| V/C Ratio(X) | 0.35 | 0.66 | 0.76 | 0.13 | 0.54 | 0.44 |
| Avail Cap(c_a), veh/h | 482 | 1967 | 1936 | 1640 | 584 | 520 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.8 | 4.7 | 5.4 | 2.8 | 24.7 | 24.4 |
| Incr Delay (d2), s/veh | 0.7 | 0.6 | 1.0 | 0.1 | 2.9 | 2.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 2.0 | 2.8 | 0.2 | 1.1 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | |
| LnGrp Delay(d),s/veh | 15.5 | 5.3 | 6.4 | 2.9 | 27.6 | 26.7 |
| LnGrp LOS | B | A | A | A | C | C |
| Approach Vol, veh/h | | 978 | 1124 | | 143 | |
| Approach Delay, s/veh | | 6.4 | 6.0 | | 27.2 | |
| Approach LOS | | A | A | | C | |
| Timer - Assigned Phs | | | | 4 | 6 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 45.6 | 11.0 | 45.6 |
| Change Period (Y+Rc), s | | | | 6.0 | 6.0 | 6.0 |
| Max Green Setting (Gmax), s | | | | 59.0 | 19.0 | 59.0 |
| Max Q Clear Time (g_c+I1), s | | | | 31.2 | 4.6 | 21.2 |
| Green Ext Time (p_c), s | | | | 8.4 | 0.3 | 9.6 |
| Intersection Summary | | | | | | |
| HCM 6th Ctrl Delay | | | 7.5 | | | |
| HCM 6th LOS | | | A | | | |

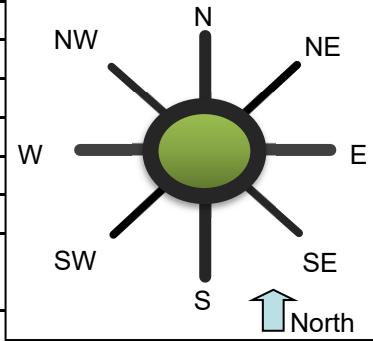
Intersection: 4: E Cherokee Dr & Ranchwood Trail

| Movement | EB | EB | WB | WB | SB | SB |
|-----------------------|-----|------|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | R |
| Maximum Queue (ft) | 76 | 208 | 210 | 70 | 90 | 64 |
| Average Queue (ft) | 43 | 94 | 112 | 27 | 37 | 17 |
| 95th Queue (ft) | 81 | 181 | 186 | 61 | 83 | 45 |
| Link Distance (ft) | | 3832 | 566 | | 636 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 235 | | | 175 | | 135 |
| Storage Blk Time (%) | | | 1 | | | |
| Queuing Penalty (veh) | | | 1 | | | |

Zone Summary

Zone wide Queuing Penalty: 1

| General & Site Information | | v 4.2 |
|----------------------------|------------------------------|-------|
| Analyst: | BTB | |
| Agency/Co: | Lowe Engineers | |
| Date: | 5/6/2020 | |
| Project or PI#: | E Cherokee Dr Corridor Study | |
| Year, Peak Hour: | 2039 AM | |
| County/District: | Cherokee County | |
| Intersection Name: | Avery Rd at E Cherokee Dr | |



| Volumes | | Entry Legs (FROM) | | | | | | | |
|----------------|----------------|-------------------|--------|-------|--------|-------|--------|-------|--------|
| | | N (1) | NE (2) | E (3) | SE (4) | S (5) | SW (6) | W (7) | NW (8) |
| Exit Legs (TO) | N (1), vph | | | 5 | | 371 | | 227 | |
| | NE (2), vph | | | | | | | | |
| | E (3), vph | 1 | | | | 6 | | | |
| | SE (4), vph | | | | | | | | |
| | S (5), vph | 599 | | | | | | | |
| | SW (6), vph | | | | | | | | |
| | W (7), vph | 162 | | | | | | | |
| | NW (8), vph | | | | | | | | |
| Output | Total Vehicles | 762 | 0 | 5 | 0 | 377 | 0 | 227 | 0 |

| Volume Characteristics | N | NE | E | SE | S | SW | W | NW |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| % Cars | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| % Heavy Vehicles | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| % Bicycle | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| # of Pedestrians (ped/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.95 | 0.95 | 0.75 | 0.95 | 0.77 | 0.95 | 0.91 | 0.95 |
| F _{HV} | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| F _{ped} | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

| Entry/Conflicting Flows | N | NE | E | SE | S | SW | W | NW |
|----------------------------|-----|----|-----|----|-----|----|-----|----|
| Flow to Leg # N (1), pcu/h | 0 | 0 | 7 | 0 | 482 | 0 | 249 | 0 |
| NE (2), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E (3), pcu/h | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 |
| SE (4), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S (5), pcu/h | 631 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW (6), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W (7), pcu/h | 171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW (8), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry flow, pcu/h | 802 | 0 | 7 | 0 | 490 | 0 | 249 | 0 |
| Conflicting flow, pcu/h | 0 | 0 | 731 | 0 | 251 | 0 | 632 | 0 |

| Results: Approach Measures of Effectiveness | | | | | | | | |
|--|-------------|----|-------------|----|-------------|----|-------------|----|
| HCM 6th Edition | N | NE | E | SE | S | SW | W | NW |
| Entry Capacity, vph | 1380 | NA | 655 | NA | 1069 | NA | 725 | NA |
| Entry Flow Rates, vph | 802 | 0 | 7 | 0 | 490 | 0 | 249 | 0 |
| V/C ratio | 0.58 | | 0.01 | | 0.46 | | 0.34 | |
| Control Delay, sec/pcu | 9.1 | | 5.6 | | 8.5 | | 9.3 | |
| LOS | A | | A | | A | | A | |
| Average Queue (ft) | 51 | | | | 29 | | 16 | |
| 95th % Queue (ft) | 99 | | 1 | | 61 | | 38 | |

| Overall Intersection Measures of Effectiveness | | | | | |
|---|------------|----------------|----------|-------------------------|-------------|
| Int Control Delay (sec) | 8.9 | Int LOS | A | Max Approach V/C | 0.58 |

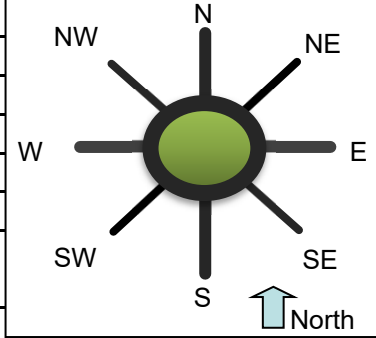
Notes: v 4.2

Unit Legend:
 vph = vehicles per hour
 PHF = peak hour factor
 F_{HV} = heavy vehicle factor
 pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)

| Bypass Characteristics | Bypass #1 | Bypass #2 | Bypass #3 | Bypass #4 | Bypass #5 | Bypass #6 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Select Entry Leg from Bypass (FROM) | | | | | | |
| Select Exit Leg for Bypass (TO) | | | | | | |
| Does the bypass have a dedicated receiving lane? | | | | | | |
| <i>Volumes</i> | | | | | | |
| Right Turn Volume removed from Entry Leg | | | | | | |
| <i>Volume Characteristics (for entry leg)</i> | | | | | | |
| PHF | | | | | | |
| F _{HV} | | | | | | |
| F _{ped} | | | | | | |
| NOTE: Volume Characteristics for Exit Leg are already taken into account | | | | | | |
| <i>Entry/Conflicting Flows</i> | | | | | | |
| Entry Flow, pcu/hr | | | | | | |
| Conflicting Flow, pcu/hr | | | | | | |
| Bypass Lane Results (HCM 6th Edition) | | | | | | |
| Entry Capacity of Bypass, vph | | | | | | |
| Flow Rates of Exiting Traffic, vph | | | | | | |
| V/C ratio | | | | | | |
| Control Delay, s/veh | | | | | | |
| LOS | | | | | | |
| 95th % Queue (veh) | | | | | | |
| 95th % Queue (ft) | | | | | | |
| Approach w/Bypass Delay, s/veh | | | | | | |
| Approach w/Bypass LOS | | | | | | |

| General & Site Information | | v 4.2 |
|----------------------------|------------------------------|-------|
| Analyst: | BTB | |
| Agency/Co: | Lowe Engineers | |
| Date: | 5/6/2020 | |
| Project or PI#: | E Cherokee Dr Corridor Study | |
| Year, Peak Hour: | 2039 PM | |
| County/District: | Cherokee County | |
| Intersection Name: | Avery Rd at E Cherokee Dr | |



| Volumes | | Entry Legs (FROM) | | | | | | | |
|----------------|----------------|-------------------|--------|-------|--------|-------|--------|-------|--------|
| | | N (1) | NE (2) | E (3) | SE (4) | S (5) | SW (6) | W (7) | NW (8) |
| Exit Legs (TO) | N (1), vph | | | 12 | | 624 | | 185 | |
| | NE (2), vph | | | | | | | | |
| | E (3), vph | 5 | | | | 3 | | 7 | |
| | SE (4), vph | | | | | | | | |
| | S (5), vph | 600 | | 5 | | | | 3 | |
| | SW (6), vph | | | | | | | | |
| | W (7), vph | 288 | | 6 | | 1 | | | |
| | NW (8), vph | | | | | | | | |
| Output | Total Vehicles | 893 | 0 | 23 | 0 | 628 | 0 | 195 | 0 |

| Volume Characteristics | N | NE | E | SE | S | SW | W | NW |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| % Cars | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| % Heavy Vehicles | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| % Bicycle | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| # of Pedestrians (ped/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.92 | 0.95 | 0.75 | 0.95 | 0.94 | 0.95 | 0.84 | 0.95 |
| F _{HV} | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| F _{ped} | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

| Entry/Conflicting Flows | N | NE | E | SE | S | SW | W | NW |
|----------------------------|-----|----|-----|----|-----|----|-----|----|
| Flow to Leg # N (1), pcu/h | 0 | 0 | 16 | 0 | 664 | 0 | 220 | 0 |
| NE (2), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E (3), pcu/h | 5 | 0 | 0 | 0 | 3 | 0 | 8 | 0 |
| SE (4), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S (5), pcu/h | 652 | 0 | 7 | 0 | 0 | 0 | 4 | 0 |
| SW (6), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W (7), pcu/h | 313 | 0 | 8 | 0 | 1 | 0 | 0 | 0 |
| NW (8), pcu/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry flow, pcu/h | 971 | 0 | 31 | 0 | 668 | 0 | 232 | 0 |
| Conflicting flow, pcu/h | 16 | 0 | 885 | 0 | 234 | 0 | 664 | 0 |

| Results: Approach Measures of Effectiveness | | | | | | | | |
|--|-------------|----|-------------|----|-------------|----|-------------|----|
| HCM 6th Edition | N | NE | E | SE | S | SW | W | NW |
| Entry Capacity, vph | 1358 | NA | 559 | NA | 1087 | NA | 701 | NA |
| Entry Flow Rates, vph | 971 | 0 | 31 | 0 | 668 | 0 | 232 | 0 |
| V/C ratio | 0.71 | | 0.05 | | 0.61 | | 0.33 | |
| Control Delay, sec/pcu | 12.6 | | 7.1 | | 11.5 | | 9.3 | |
| LOS | B | | A | | B | | A | |
| Average Queue (ft) | 85 | | 2 | | 53 | | 15 | |
| 95th % Queue (ft) | 165 | | 4 | | 110 | | 36 | |

| Overall Intersection Measures of Effectiveness | | | | | |
|---|-------------|----------------|----------|-------------------------|-------------|
| Int Control Delay (sec) | 11.7 | Int LOS | B | Max Approach V/C | 0.71 |

Notes: v 4.2

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

F_{HV} = heavy vehicle factor

pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)

| Bypass Characteristics | Bypass #1 | Bypass #2 | Bypass #3 | Bypass #4 | Bypass #5 | Bypass #6 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Select Entry Leg from Bypass (FROM) | | | | | | |
| Select Exit Leg for Bypass (TO) | | | | | | |
| Does the bypass have a dedicated receiving lane? | | | | | | |
| <i>Volumes</i> | | | | | | |
| Right Turn Volume removed from Entry Leg | | | | | | |
| <i>Volume Characteristics (for entry leg)</i> | | | | | | |
| PHF | | | | | | |
| F _{HV} | | | | | | |
| F _{ped} | | | | | | |
| NOTE: Volume Characteristics for Exit Leg are already taken into account | | | | | | |
| <i>Entry/Conflicting Flows</i> | | | | | | |
| Entry Flow, pcu/hr | | | | | | |
| Conflicting Flow, pcu/hr | | | | | | |
| Bypass Lane Results (HCM 6th Edition) | | | | | | |
| Entry Capacity of Bypass, vph | | | | | | |
| Flow Rates of Exiting Traffic, vph | | | | | | |
| V/C ratio | | | | | | |
| Control Delay, s/veh | | | | | | |
| LOS | | | | | | |
| 95th % Queue (veh) | | | | | | |
| 95th % Queue (ft) | | | | | | |
| Approach w/Bypass Delay, s/veh | | | | | | |
| Approach w/Bypass LOS | | | | | | |

Appendix C: Field / School Observations



Field Observations

2/25/2020

E Cherokee Dr SB Travel Run AM Peak

7:10 AM

SR 20 – minimal queueing, queueing present due to cycle length, but appears to clear every cycle

Macedonia Elementary – Crossing guard (appears to be non-police) controlling traffic and holds up E Cherokee. School queueing is almost queued back to Water Tank. Left-turn in here would help a lot and allow better crossing guard control

Water Tank – 2 Vehicles queued

Haley Farm – No queueing

Johnson Brady – No queueing

Beavers Rd – No queueing

7:20 AM

Union Hill – School entrance controlled by crossing guard, left turn queue to enter the school backed halfway to the signalized intersection. Otherwise minimal queueing and cleared during the light

7:25 AM

Avery Rd – No queueing on side-street. Some queueing / congestion on E Cherokee as many vehicles are turning right to Avery Rd north

Bart Manous – A couple of vehicles are queued

7:30

Hickory Rd – School is controlled by crossing guard, queue appears to be clearing on E Cherokee, some queueing on Hickory in front of the school around the curve

Traffic on E Cherokee getting worse, may cause difficulty for left-turning vehicles. There is some platooning as well from the signalized intersection

7:35

Little Rd – No queueing, north side is closed to traffic detour

Travel speed around 30-35 mph for this stretch

Bradshaw Club Dr – No queueing but may have difficulty exiting to the left, southbound more congested

Avery Creek – Vehicle used the right-turn lane southbound and it seems like the lane is not long enough. Car queued exiting had to pull far forward to get sight distance

Little Brook – cones set up for construction no queueing

Ranchwood – 5-6 vehicles queued, might be having difficulty exiting to the left to get sight distance.

Copper Ridge Rd – Queue blocks intersection but no queueing observed

Mill Creek – Queueing backs all the way to the shell station at S Sequoya. Moves very slowly. Southbound left-turn heavily used, no queue past this intersection. Left turn blocking through movement?

East Cherokee NB Travel Run AM Peak

7:45AM

Mill Creek – NB no queueing, no side-road queueing. Lots of school bus activity in the area. SB left-turn queue is backing up. Queue still extended to shell station at tomahawk

Copper Ridge Rd – No queueing observed

Cyclist traveling SB causing some small congestion

Thornwood – No queueing

NB speed faster 40-45mph

Ranchwood – 4-5 cars queued

Little Brook – No queueing

Avery Creek – No queueing

45 MPH along this stretch

Newcastle Walk – No queueing

Bradshaw Club – Left-turn 1 vehicle right-turn was able to move

Little Rd – No queueing

Hickory Rd – Queueing clear after 1 cycle, crossing guard still active. There is queueing attributed to the signal, SB queue extends past Library Drwy by a couple of cars

Hickory Flat – Not part of project but lots of queueing

Weather – Misty Rain

Any intersections not discussed is because it is clear and nothing to report

Bart Manous – 2 right-turn queue, 1 left turn queue. Right turns might not be able to see past the left-turn vehicle

45 mph NB is spread out, SB not congested

Epperson – No queue

Avery Rd - Clear

Rear-end accident just north of Avery Rd, near a private driveway, not sure why, possibly someone trying to turn into their driveway and someone else just hit them. Pretty substantial damage to both vehicles involved

8:03 AM

Union Hill – No queueing, 1 on each side-street

No school traffic

Johnson Brady Rd – No queueing

Speed slowed down possibly due to left-turning vehicles 35-40 possibly school bus

Beavers Rd – No queueing

Haley Farms – no queueing

Water Tank – No queueing

Macedonia – School clear

SR 20 – Congested, NB queue extends all the way to end of turn lane – doesn't clear on protected but clears on flashing yellow. SB queue small

8:12 AM

End of run

School Observations PM Pick-Up

2:00 PM

Avery elementary, school bus traffic queueing internal to school

2:07 PM

Hickory Flat Elem – No external queueing observed, crossing guard active.

2:15 PM

Johnston Elem – No external queueing observed carline internal to site

2:20 PM

Johnston Elem – No queueing other than initial release which cleared quickly, no external queueing

East Cherokee Dr – PM Peak SB Run

4:36PM

SR 20 – Minimal queueing, no turn-lane backups

Macedonia Elem – Clear, no queueing

Water Tank Rd – No queueing

4:40 PM

Beavers Rd – No queueing

Haley Farms Rd – No queueing

E Cherokee is operating at free flow conditions

Johnson Brady – No queueing

Union Hill – No queueing, E Cherokee Free flow conditions

Avery Rd – No queueing, saw car dealing with sight distance issues

Epperson Rd – No side-street queueing, queue for left-turn into Epperson ~10 cars cleared quickly

4:45 PM

Bart Manous - 2 Left, 1 Right. Right turn has issues exiting due to approach angle / sight distance

Posted speed limit change 35 mph around Turners Ct

4:50 PM

Hickory Rd – East Cherokee queueing for cycle length, significant queueing on Hickory both directions, school traffic clear

Little Rd – No queueing

Bradshaw Club – No queueing

Newcastle Walk – No queueing

Avery Creek – No queueing on side-street observed left-turn but cleared quickly

4:54 PM

Little Brook – Mainline queueing due to left-turns, no side street queueing

Ranchwood - No queueing

4:57 PM

Copper – 1 truck queued had to pull far forward due to sight distance, E Cherokee congested but there is platooning from downstream signal.

Mill Creek – Significant queueing mill creek for left turn to sb e Cherokee. Left-turn Queue does not clear in one cycle with long green time. Queue in excess of 300'

2:15 PM

Macedonia – No external queue, no crossing guard, queueing is to end of parking lot doesn't back up into E Cherokee

E Cherokee Mill PM NB**5:40 PM**

Mill Creek – NB volume on Mill creek queue extends almost to bridge over Mill creek ~0.5 miles, everyone turning northbound left, eastbound traffic queues to Main St signal. Westbound traffic queues past copper. No school traffic.

Copper – No queueing, but intersection blocked, no available gaps

Thornwood – No queue

Ranchwood – NB queue for left onto Ranchwood. 1 vehicle trying to turn left. No available gaps

Village Ct – No queueing 1 vehicle turning right

Not many gaps as vehicles approach 45 mph, all side streets on this stretch likely to have issues with left-turns, left turns from E Cherokee may cause issues with queueing on E Cherokee as well

Avery Creek – 1 left on minor road, has to pull full into accel / decel-lane to get sight distance. Right-turn decel doesn't appear to be long enough.

5:47 PM

Bradshaw Club – No queueing

Little Rd – slowdown for mainline right-turn, minimal queueing on side street

Freeflow conditions on E Cherokee

Hickory rd intersection speed limit change

Hickory Rd – Queueing clears in 1 cycle, E Cherokee clearing in 1 cycle. Large volume on hickory, check left-turn E Cherokee left turns might be overserved check signal timing

5:55 PM

Bart Manous – no side street queueing

Speed limit 35 mph check for signs to north of intersection

Ashton Farms – No queueing

Epperson – No queueing

Avery – 1 veh queued to turn sbl

5:57

Union Hill – cycle length queueing but clearing. Minimal volume on union hill

Johnson – No queue

Beavers – No queue

Haley Farms – No queue

Water tank - no queue

Macedonia – no queue

6:04

Sr 20 – SR 20 is slow but no substantial queueing observed. Not much queuing all around.

Appendix D: Crash History



1 Mill Creek Rd

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 2 | | | 2 |
| Head-On | | | | 0 |
| Rear End | 12 | 1 | | 13 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | 1 | | 1 |
| Head-On | | 1 | | 1 |
| Rear End | 17 | 3 | | 20 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 16 | 3 | | 19 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | 1 | | 1 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 3 | 1 | | 4 |
| Head-On | | | | 0 |
| Rear End | 8 | | | 8 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 1 | | 2 |
| Head-On | | | | 0 |
| Rear End | 11 | 1 | | 12 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 13 | 0 | 2 | 0 | 0 | 0 | 15 | 1 | 1 |
| 2018 | 20 | 1 | 1 | 1 | 1 | 0 | 24 | 5 | 0 |
| 2017 | 19 | 1 | 0 | 0 | 0 | 1 | 21 | 4 | 0 |
| 2016 | 8 | 2 | 4 | 0 | 0 | 0 | 14 | 1 | 0 |
| 2015 | 12 | 1 | 2 | 0 | 1 | 0 | 16 | 2 | 0 |

Notes:

Rear ends: Relatively evenly spread among all approaches, primary attribute is following to close
 Angle: Spread evenly among approaches

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 6 | 3 | 0 | 9 |
| Head-On | 0 | 1 | 0 | 1 |
| Rear End | 64 | 8 | 0 | 72 |
| Sideswipe - Same | 3 | 0 | 0 | 3 |
| Sideswipe - Opposite | 1 | 1 | 0 | 2 |
| Not a Collision w/ Motor Veh | 3 | 0 | 0 | 3 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 2 | | | 2 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 4 | | | 4 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | 1 | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | 2 | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | 1 | | 4 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2018 | 4 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 |
| 2017 | 3 | 1 | 0 | 0 | 0 | 1 | 5 | 1 | 0 |
| 2016 | 3 | 1 | 0 | 0 | 0 | 0 | 4 | 2 | 0 |
| 2015 | 4 | 1 | 0 | 0 | 0 | 0 | 5 | 1 | 0 |

Notes:

No real trends

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 0 | 0 | 2 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 11 | 3 | 0 | 14 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 3 | 0 | 0 | 3 |
| Not a Collision w/ Motor Veh | 1 | 1 | 0 | 2 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | 1 | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | 1 | | 1 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 2 | 0 |
| 2016 | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 |
| 2015 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |

Notes:

No crashes in 2018, Failure to yields

Pedestrian

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 1 | 0 | 3 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 2 | 1 | 0 | 3 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 2 | 1 | 0 | 3 |

04 Ranchwood Trail

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 2 | | | 2 |
| Head-On | | | | 0 |
| Rear End | 1 | 1 | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 1 | | 2 |
| Head-On | | | | 0 |
| Rear End | 3 | 1 | | 4 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 2 | | | 2 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 2 | 1 | | 3 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | 1 | | 2 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 2 | 0 | 2 | 0 | 0 | 0 | 4 | 1 | 0 |
| 2018 | 4 | 0 | 2 | 0 | 0 | 0 | 6 | 2 | 0 |
| 2017 | 2 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 |
| 2016 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 |
| 2015 | 0 | 0 | 3 | 0 | 2 | 0 | 5 | 2 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 5 | 2 | 0 | 7 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 7 | 2 | 0 | 9 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 4 | 1 | 0 | 5 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | 1 | | 1 |
| Head-On | | | | 0 |
| Rear End | 3 | | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | 1 | | 1 |
| Struck Object | | 1 | | 1 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | 1 | | 1 |
| Head-On | 1 | | | 1 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2016 | 3 | 1 | 1 | 0 | 1 | 0 | 6 | 3 | 0 |
| 2015 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 0 |

Notes:

2018 no crashes

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 2 | 0 | 4 |
| Head-On | 1 | 0 | 0 | 1 |
| Rear End | 4 | 0 | 0 | 4 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 1 | 0 | 1 |
| Not a Collision w/ Motor Veh | 1 | 1 | 0 | 2 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | 1 | | 4 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | 1 | | 1 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | 1 | | 4 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 3 | | | 3 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2018 | 4 | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 0 |
| 2017 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 |
| 2016 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 |
| 2015 | 0 | 1 | 0 | 0 | 3 | 0 | 4 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 1 | 0 | 0 | 1 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 7 | 3 | 0 | 10 |
| Sideswipe - Same | 1 | 0 | 0 | 1 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 4 | 1 | 0 | 5 |

tree

tree / deer

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | 1 | | | 1 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 2 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |

Notes:

2016 no crashes

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 0 | 0 | 0 | 0 |
| Head-On | 1 | 0 | 0 | 1 |
| Rear End | 2 | 0 | 0 | 2 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 3 | 0 | 0 | 3 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | 1 | | 1 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2016 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |

Notes:

2018 no crashes

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 0 | 0 | 0 | 0 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 3 | 0 | 0 | 3 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 2 | 1 | 0 | 3 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 4 | 2 | | 6 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 2 | | | 2 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 |
| 2018 | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 0 |
| 2017 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2016 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 1 | 0 |
| 2015 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 0 | 0 | 2 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 9 | 3 | 0 | 12 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 2 | 0 | 0 | 2 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | 1 | | 1 |
| Rear End | 15 | 3 | | 18 |
| Sideswipe - Same | 2 | | | 2 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 3 | | 4 |
| Head-On | | | | 0 |
| Rear End | 9 | | | 9 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | 1 | | 1 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 3 | 2 | | 5 |
| Head-On | 1 | 2 | | 3 |
| Rear End | 12 | 3 | | 15 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 26 | 2 | | 28 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 2 | | | 2 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 2 | | 3 |
| Head-On | | | | 0 |
| Rear End | 9 | | | 9 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 3 | | | 3 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 18 | 3 | 1 | 1 | 1 | 0 | 24 | 4 | 0 |
| 2018 | 9 | 1 | 4 | 0 | 0 | 1 | 15 | 4 | 0 |
| 2017 | 15 | 1 | 5 | 3 | 1 | 0 | 25 | 7 | 0 |
| 2016 | 28 | 0 | 1 | 0 | 0 | 2 | 31 | 2 | 0 |
| 2015 | 9 | 0 | 3 | 0 | 3 | 0 | 15 | 2 | 0 |

Notes:

Rear Ends: Mostly afternoon
 30% Eastbound
 27% Northbound
 20% Southbound
 23% Westbound

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 7 | 7 | 0 | 14 |
| Head-On | 1 | 3 | 0 | 4 |
| Rear End | 71 | 8 | 0 | 79 |
| Sideswipe - Same | 3 | 0 | 0 | 3 |
| Sideswipe - Opposite | 2 | 0 | 0 | 2 |
| Not a Collision w/ Motor Veh | 7 | 1 | 0 | 8 |

deer

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 1 | | 2 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | 1 | | 2 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 2 | 2 | 0 | 1 | 0 | 5 | 1 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 3 | 0 | 0 | 0 | 2 | 0 | 5 | 1 | 0 |
| 2016 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2015 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

Notes:

No crashes 2018
Utility pole hit twice

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 1 | 0 | 3 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 5 | 0 | 0 | 5 |
| Sideswipe - Same | 1 | 0 | 0 | 1 |
| Sideswipe - Opposite | 1 | 0 | 0 | 1 |
| Not a Collision w/ Motor Veh | 2 | 1 | 0 | 3 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | 1 | | 1 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 0 | 0 | 0 | 0 |
| Head-On | 0 | 1 | 0 | 1 |
| Rear End | 0 | 0 | 0 | 0 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 2 | 0 | 0 | 2 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 3 | | | 3 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 2 | | | 2 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | 1 | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| 2018 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2017 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| 2016 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2015 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |

Notes:

Angle crashes primarily involve southbound veh

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 7 | 0 | 0 | 7 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 0 | 0 | 0 | 0 |
| Sideswipe - Same | 0 | 1 | 0 | 1 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 1 | 0 | 0 | 1 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | 1 | | 2 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 3 | | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 1 | 2 | | 3 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 3 | | | 3 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 2 | 0 | 2 | 0 | 0 | 0 | 4 | 1 | 0 |
| 2018 | 3 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 |
| 2017 | 2 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| 2016 | 3 | 1 | 1 | 0 | 0 | 0 | 5 | 2 | 0 |
| 2015 | 3 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |

Notes:

Rear End accidents happening mostly on southbound traffic for those reporting movements

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 3 | 1 | 0 | 4 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 11 | 2 | 0 | 13 |
| Sideswipe - Same | 1 | 0 | 0 | 1 |
| Sideswipe - Opposite | 2 | 0 | 0 | 2 |
| Not a Collision w/ Motor Veh | 0 | 0 | 0 | 0 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | 1 | | 1 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 |
| 2018 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 0 |
| 2017 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 0 | 0 | 0 | 0 |
| Head-On | 0 | 1 | 0 | 1 |
| Rear End | 2 | 2 | 0 | 4 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 1 | 0 | 0 | 1 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | 2 | | | 2 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | 1 | | | 1 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2018 | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 1 | 0 | 0 | 1 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 4 | 0 | 0 | 4 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 4 | 0 | 0 | 4 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 3 | | | 3 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | 1 | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | 1 | | | 1 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | 1 | | | 1 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2018 | 0 | 0 | 1 | 0 | 0 | 3 | 4 | 0 | 0 |
| 2017 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 2 | 0 | 0 | 2 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 1 | 1 | 0 | 2 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 4 | 0 | 0 | 4 |

18 Water Tank Rd

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 1 | | | 1 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | 1 | | 1 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 3 | | | 3 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes:

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 1 | 0 | 0 | 1 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 0 | 0 | 0 | 0 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 3 | 1 | 0 | 4 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | | | | 0 |
| Head-On | | | | 0 |
| Rear End | | | | 0 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Notes:

All accidents at Water Tank - Recheck

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 0 | 0 | 0 | 0 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 0 | 0 | 0 | 0 |
| Sideswipe - Same | 0 | 0 | 0 | 0 |
| Sideswipe - Opposite | 0 | 0 | 0 | 0 |
| Not a Collision w/ Motor Veh | 0 | 0 | 0 | 0 |

2019

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 3 | 2 | | 5 |
| Head-On | | | | 0 |
| Rear End | 10 | 4 | | 14 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2018

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 5 | 1 | | 6 |
| Head-On | | | | 0 |
| Rear End | 7 | 1 | | 8 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2017

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 5 | 2 | | 7 |
| Head-On | | | | 0 |
| Rear End | 11 | 2 | | 13 |
| Sideswipe - Same | | | | 0 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2016

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 10 | | | 10 |
| Head-On | | | | 0 |
| Rear End | 12 | 2 | | 14 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | | | | 0 |
| Struck Object | 1 | | | 1 |
| Run off Road | | | | 0 |

2015

| Type | PDO | Injury | Fatal | Total |
|----------------------|-----|--------|-------|-------|
| Angle | 7 | 2 | | 9 |
| Head-On | | | | 0 |
| Rear End | 1 | 13 | | 14 |
| Sideswipe - Same | 1 | | | 1 |
| Sideswipe - Opposite | 1 | | | 1 |
| Struck Object | | | | 0 |
| Run off Road | | | | 0 |

| Year | Rear-end | Side-swipe | Angle | Head-on | Struck Object | Run off the Road | Total Accidents | Injuries | Fatalities |
|------|----------|------------|-------|---------|---------------|------------------|-----------------|----------|------------|
| 2019 | 14 | 1 | 5 | 0 | 1 | 0 | 21 | 6 | 0 |
| 2018 | 8 | 0 | 6 | 0 | 1 | 0 | 15 | 2 | 0 |
| 2017 | 13 | 1 | 7 | 0 | 1 | 0 | 22 | 4 | 0 |
| 2016 | 14 | 1 | 10 | 0 | 1 | 0 | 26 | 2 | 0 |
| 2015 | 14 | 2 | 9 | 0 | 0 | 0 | 25 | 15 | 0 |

Notes:

Angle: Left turn failure to yield, spread with higher west and south
 Rear-end: Mainly on SR 20

Total

| Type | PDO | Injury | Fatal | Total |
|------------------------------|-----|--------|-------|-------|
| Angle | 30 | 7 | 0 | 37 |
| Head-On | 0 | 0 | 0 | 0 |
| Rear End | 41 | 22 | 0 | 63 |
| Sideswipe - Same | 3 | 0 | 0 | 3 |
| Sideswipe - Opposite | 2 | 0 | 0 | 2 |
| Not a Collision w/ Motor Veh | 4 | 0 | 0 | 4 |

Appendix E: Growth Rate Analysis



Historic AADT Growth Rates

| Segment E Cherokee Dr North of Haley Farm Rd | | | | |
|---|---|-------|--------|--|
| Source | GDOT | | | |
| Link | https://gdottrafficdata.drakewell.com | | | |
| Class | Minor Arterial (Urban) | | | |
| Year | a/e | AADT | Growth | |
| 2018 | e | 6,620 | 1.5% | |
| 2017 | e | 6,520 | 2.0% | |
| 2016 | e | 6,390 | 2.4% | |
| 2015 | e | 6,240 | 4.0% | |
| 2014 | - | 6,000 | 0.0% | |
| 2013 | - | 6,000 | 2.2% | |
| 2012 | - | 5,870 | -2.8% | |
| 2011 | - | 6,040 | -3.4% | |
| 2010 | - | 6,250 | -1.1% | |
| 2009 | - | 6,320 | | |
| Averages | | | | |
| | | 2018 | 1.5% | |
| | | 2016 | 1.8% | |
| | | 2015 | 3.0% | |
| Truck % | | | | |
| | | 2016 | 11.00% | |

| Segment E Cherokee Dr North of Lower Union Hill Rd | | | | |
|---|---|-------|--------|--|
| Source | GDOT | | | |
| Link | https://gdottrafficdata.drakewell.com | | | |
| Class | Minor Arterial (Urban) | | | |
| Year | a/e | AADT | Growth | |
| 2018 | a | 8,090 | -13.4% | |
| 2017 | e | 9,340 | 5.9% | |
| 2016 | e | 8,820 | 3.3% | |
| 2015 | a | 8,540 | 1.2% | |
| 2014 | - | 8,440 | 0.0% | |
| 2013 | - | 8,440 | 2.2% | |
| 2012 | - | 8,260 | -1.5% | |
| 2011 | - | 8,390 | 36.4% | |
| 2010 | - | 6,150 | -16.1% | |
| 2009 | - | 7,330 | | |
| Averages | | | | |
| | | 2018 | -13.4% | |
| | | 2016 | -4.2% | |
| | | 2015 | -2.7% | |
| Truck % | | | | |
| | | 2018 | 5.00% | |

| Segment E Cherokee Dr South of Lower Union Hill Rd | | | | |
|---|---|--------|--------|--|
| Source | GDOT | | | |
| Link | https://gdottrafficdata.drakewell.com | | | |
| Class | Minor Arterial (Urban) | | | |
| Year | a/e | AADT | Growth | |
| 2018 | e | 10,900 | 0.0% | |
| 2017 | e | 10,900 | 5.8% | |
| 2016 | e | 10,300 | 3.0% | |
| 2015 | e | 10,000 | 7.5% | |
| 2014 | - | 9,300 | 0.0% | |
| 2013 | - | 9,300 | -0.6% | |
| 2012 | - | 9,360 | -1.7% | |
| 2011 | - | 9,520 | -2.4% | |
| 2010 | - | 9,750 | -0.9% | |
| 2009 | - | 9,840 | | |
| Averages | | | | |
| | | 2018 | 0.0% | |
| | | 2016 | 2.9% | |
| | | 2015 | 4.4% | |
| Truck % | | | | |
| | | 2016 | 12.00% | |

| Segment E Cherokee Dr East of Tripp Rd | | | | |
|---|---|--------|--------|--|
| Source | GDOT | | | |
| Link | https://gdottrafficdata.drakewell.com | | | |
| Class | Minor Arterial (Urban) | | | |
| Year | a/e | AADT | Growth | |
| 2018 | e | 11,900 | 0.0% | |
| 2017 | a | 11,900 | 16.7% | |
| 2016 | e | 10,200 | 2.9% | |
| 2015 | e | 9,910 | 7.6% | |
| 2014 | - | 9,210 | 0.0% | |
| 2013 | - | 9,210 | -0.6% | |
| 2012 | - | 9,270 | 1.4% | |
| 2011 | - | 9,140 | -2.4% | |
| 2010 | - | 9,360 | -0.8% | |
| 2009 | - | 9,440 | | |
| Averages | | | | |
| | | 2018 | 0.0% | |
| | | 2016 | 8.0% | |
| | | 2015 | 9.6% | |
| Truck % | | | | |
| | | 2018 | 4.00% | |

Population Growth Rates

Actual Growth Rates

| Cherokee County | | |
|-----------------|--------------------|--------|
| Location | Cherokee County | |
| Source | U.S. Census Bureau | |
| Year | Population | Growth |
| 2017 | 247,573 | 2.5% |
| 2016 | 241,600 | 2.6% |
| 2015 | 235,424 | 2.2% |
| 2014 | 230,396 | 2.6% |
| 2013 | 224,487 | |
| Averages | | |
| 2017 | 2016 | 2.5% |
| 2017 | 2013 | 2.5% |

| Canton | | |
|----------|--------------------|--------|
| Location | Canton | |
| Source | U.S. Census Bureau | |
| Year | Population | Growth |
| 2017 | 27,936 | 6.2% |
| 2016 | 26,308 | 2.7% |
| 2015 | 25,619 | 2.9% |
| 2014 | 24,909 | 2.7% |
| 2013 | 24,261 | |
| Averages | | |
| 2017 | 2016 | 6.2% |
| 2017 | 2013 | 3.6% |

| Woodstock GA | | |
|--------------|--------------------|--------|
| Location | Woodstock GA | |
| Source | U.S. Census Bureau | |
| Year | Population | Growth |
| 2017 | 31,564 | 2.4% |
| 2016 | 30,832 | 4.4% |
| 2015 | 29,520 | 7.1% |
| 2014 | 27,565 | 3.6% |
| 2013 | 26,600 | |
| Averages | | |
| 2017 | 2016 | 2.4% |
| 2017 | 2013 | 4.4% |

Projected Growth Rates

| Cherokee County | | |
|-----------------|---------------------|--------|
| Location | Cherokee County | |
| Source | Cherokee Comp. Plan | |
| Year | Population | Growth |
| 2010 | 214,346 | 1.7% |
| 2015 | 233,321 | 2.8% |
| 2020 | 267,877 | |
| Averages | | |
| 2020 | 2015 | 2.8% |
| 2020 | 2010 | 2.3% |

| Woodstock | | |
|-----------|---------------------|--------|
| Location | Woodstock | |
| Source | Cherokee Comp. Plan | |
| Year | Population | Growth |
| 2010 | 23,911 | 2.2% |
| 2015 | 26,681 | 2.4% |
| 2020 | 29,987 | |
| Averages | | |
| 2020 | 2015 | 2.4% |
| 2020 | 2010 | 2.3% |

| Canton | | |
|----------|---------------------|--------|
| Location | Canton | |
| Source | Cherokee Comp. Plan | |
| Year | Population | Growth |
| 2010 | 22,958 | 1.7% |
| 2015 | 24,980 | 1.8% |
| 2020 | 27,340 | |
| Averages | | |
| 2020 | 2015 | 1.8% |
| 2020 | 2010 | 1.8% |

| Cherokee County | | |
|-----------------|-----------------|--------|
| Location | Cherokee County | |
| Source | ARC Population | |
| Year | Population | Growth |
| 2050 | 374,800 | 1.3% |
| 2015 | 235,900 | |
| Averages | | |
| 2050 | 2015 | 1.3% |

<https://33n.atlantaregional.com/arc-series-16-forecast>

[https://www.cherokeega.com/Planning-and-](https://www.cherokeega.com/Planning-and-Zoning/resources/CompPlanUpdate2018/CherokeeCountyCompPlanFinal20181120-small.pdf)

[Zoning/ resources/CompPlanUpdate2018/CherokeeCountyCompPlanFinal20181120-small.pdf](https://www.cherokeega.com/Planning-and-Zoning/resources/CompPlanUpdate2018/CherokeeCountyCompPlanFinal20181120-small.pdf)

<https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude &met y=population&idim=sub county:1312988&hl=en&dl=en#!ctype=l&strail=false&bcs=d&nselem=h&met y=population&scale y=lin&ind y=false&rdim=country&idim=sub county:1312988:1384176&idim=county:13057&ifdim=country&tstart=1269662400000&tend=1490587200000&hl=en US&dl=en&ind=fal>

| Source | Year Range | Growth Rate |
|------------------------------|-------------|-------------|
| E Cherokee Dr | 2017 - 2018 | 1.5% |
| North of Haley Farm Rd | 2016 - 2018 | 1.8% |
| | 2015 - 2018 | 3.0% |
| E Cherokee Dr | 2017 - 2018 | -13.4% |
| North of Lower Union Hill Rd | 2016 - 2018 | -4.2% |
| | 2015 - 2018 | -2.7% |
| E Cherokee Dr | 2017 - 2018 | 0.0% |
| South of Lower Union Hill Rd | 2016 - 2018 | 2.9% |
| | 2015 - 2018 | 4.4% |
| E Cherokee Dr | 2017 - 2018 | 0.0% |
| East of Tripp Rd | 2016 - 2018 | 8.0% |
| | 2015 - 2018 | 9.6% |
| Cherokee County | 2016 - 2017 | 2.5% |
| U.S. Census Bureau | 2013 - 2017 | 2.5% |
| Canton | 2016 - 2017 | 6.2% |
| U.S. Census Bureau | 2013 - 2017 | 3.6% |
| Woodstock GA | 2016 - 2017 | 2.4% |
| U.S. Census Bureau | 2013 - 2017 | 4.4% |
| Cherokee County | 2015 - 2020 | 2.8% |
| Cherokee Comp. Plan | 2010 - 2020 | 2.3% |
| Woodstock | 2015 - 2020 | 2.4% |
| Cherokee Comp. Plan | 2010 - 2020 | 2.3% |
| Canton | 2015 - 2020 | 1.8% |
| Cherokee Comp. Plan | 2010 - 2020 | 1.8% |
| Cherokee County | 2015 - 2050 | 1.3% |
| ARC Population | | |

Growth Rate for Analysis

2.5%

Appendix F: Cost Analysis



**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|----------------------------|-----------------|----------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Mill Creek / Johnson Elem. | To Limit: | Mill Creek / Johnson Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: NBL + Widen E Cherokee to Holly Springs

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|--|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ 749,490 | 20% | | \$149,898 |
| Interchanges & Grade Separations | 2021 | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 168,000 | 10% | | \$16,800 |
| | 2,021 | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | 2,021 | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ 175,000 | 10% | | \$17,500 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ 32,670 | 10% | | \$3,267 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ 65,520 | 10% | | \$6,552 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ 3,070 | 10% | | \$307 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 1.00 | \$875,000 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$23,875 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|----------------------------|-----------------|----------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Mill Creek / Johnson Elem. | To Limit: | Mill Creek / Johnson Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: NBL + Widen E Cherokee to Holly Springs

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|--------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$119,375 | \$146,000 |
| Right of Way | \$875,000 | \$1,067,000 |
| Construction | \$1,193,750 | \$1,455,000 |
| Contingency | \$218,199 | \$266,000 |
| Total | \$2,406,325 | \$2,934,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Copper Ridge Dr | To Limit: | Copper Ridge Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Copper Ridge Dr | To Limit: | Copper Ridge Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$28,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$279,000 |
| Contingency | \$32,160 | \$33,000 |
| Total | \$326,960 | \$340,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|--------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Thornwood Dr | To Limit: | Thornwood Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| Bridges | N/A | \$ - | \$ - | 10% | | \$0 |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|--------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Thornwood Dr | To Limit: | Thornwood Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$33,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$327,000 |
| Contingency | \$32,160 | \$39,000 |
| Total | \$326,960 | \$399,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|--------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Thornwood Dr | To Limit: | Thornwood Dr |
| County: | Cherokee | Area: | Urban |

Improvement: WBL + WBR + EBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ 194,667 | 10% | | \$19,467 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$9,253 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|--------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Thornwood Dr | To Limit: | Thornwood Dr |
| County: | Cherokee | Area: | Urban |

Improvement: WBL + WBR + EBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$46,267 | \$56,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$462,667 | \$564,000 |
| Contingency | \$55,520 | \$68,000 |
| Total | \$564,453 | \$688,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Ranchwood Trail | To Limit: | Ranchwood Trail |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ WBR + SBR + Signal

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ 158,167 | 10% | | \$15,817 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ 200,000 | 10% | | \$20,000 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| Bridges | N/A | \$ - | \$ - | 10% | | \$0 |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$12,523 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Ranchwood Trail | To Limit: | Ranchwood Trail |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ WBR + SBR + Signal

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$62,617 | \$76,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$626,167 | \$763,000 |
| Contingency | \$75,140 | \$92,000 |
| Total | \$763,923 | \$931,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Ranchwood Trail | To Limit: | Ranchwood Trail |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ WBR + SBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ 158,167 | 10% | | \$15,817 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$8,523 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Ranchwood Trail | To Limit: | Ranchwood Trail |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ WBR + SBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$42,617 | \$52,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$426,167 | \$519,000 |
| Contingency | \$51,140 | \$62,000 |
| Total | \$519,923 | \$633,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|------------------------------|-----------------|------------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Village Ct / Little Brook Dr | To Limit: | Village Ct / Little Brook Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ EBR + WBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 536,000 | 10% | | \$53,600 |
| | Turning Lanes - Right | \$ 487 | \$ 158,167 | 10% | | \$15,817 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$13,883 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|------------------------------|-----------------|------------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Village Ct / Little Brook Dr | To Limit: | Village Ct / Little Brook Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ EBR + WBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$69,417 | \$72,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$694,167 | \$722,000 |
| Contingency | \$83,300 | \$87,000 |
| Total | \$846,883 | \$881,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Creek Dr | To Limit: | Avery Creek Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ Restriping SB

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Creek Dr | To Limit: | Avery Creek Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ Restriping SB

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$28,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$279,000 |
| Contingency | \$32,160 | \$33,000 |
| Total | \$326,960 | \$340,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|------------------|-----------------|------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bradshaw Club Dr | To Limit: | Bradshaw Club Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ Re-stripping southbound

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|------------------|-----------------|------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bradshaw Club Dr | To Limit: | Bradshaw Club Dr |
| County: | Cherokee | Area: | Urban |

Improvement: EBL+ Re-striping southbound

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$28,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$279,000 |
| Contingency | \$32,160 | \$33,000 |
| Total | \$326,960 | \$340,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|-----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Little Rd | To Limit: | Little Rd |
| County: | Cherokee | Area: | Urban |

Improvement: EBL + WBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 536,000 | 10% | | \$53,600 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$10,720 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|-----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Little Rd | To Limit: | Little Rd |
| County: | Cherokee | Area: | Urban |

Improvement: EBL + WBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$53,600 | \$56,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$536,000 | \$558,000 |
| Contingency | \$64,320 | \$67,000 |
| Total | \$653,920 | \$681,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|----------------------------|-----------------|----------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Mill Creek / Johnson Elem. | To Limit: | Mill Creek / Johnson Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: Widening

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ 3,569,000 | 20% | | \$713,800 |
| Interchanges & Grade Separations | 2021 | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ - | 10% | | \$0 |
| | 2,021 | \$ 487 | \$ 97,333 | 10% | | \$9,733 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | 2,021 | \$ 200,000 | \$ 200,000 | 10% | | \$20,000 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ 45,739 | 10% | | \$4,574 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ 312,000 | 10% | | \$31,200 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 1.00 | \$250,000 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$84,481 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|----------------------------|-----------------|----------------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Mill Creek / Johnson Elem. | To Limit: | Mill Creek / Johnson Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: Widening

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2039 |
| Right of Way | 2039 |
| Construction | 2039 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|--------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$422,407 | \$628,000 |
| Right of Way | \$250,000 | \$371,000 |
| Construction | \$4,224,072 | \$6,277,000 |
| Contingency | \$863,789 | \$1,284,000 |
| Total | \$5,760,268 | \$8,560,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bart Manous Rd | To Limit: | Bart Manous Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 168,000 | 10% | | \$16,800 |
| | Turning Lanes - Right | \$ 487 | \$ 146,000 | 10% | | \$14,600 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$6,280 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bart Manous Rd | To Limit: | Bart Manous Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$31,400 | \$33,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$314,000 | \$327,000 |
| Contingency | \$37,680 | \$39,000 |
| Total | \$383,080 | \$399,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bart Manous Rd | To Limit: | Bart Manous Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR+Alignment

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 2,720,000 | \$ 272,000 | 20% | | \$54,400 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 168,000 | 10% | | \$16,800 |
| | Turning Lanes - Right | \$ 487 | \$ 146,000 | 10% | | \$14,600 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.75 | \$812,500 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$11,720 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|----------------|-----------------|----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Bart Manous Rd | To Limit: | Bart Manous Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR+Alignment

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2025 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|--------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$58,600 | \$66,000 |
| Right of Way | \$812,500 | \$990,000 |
| Construction | \$586,000 | \$714,000 |
| Contingency | \$97,520 | \$118,000 |
| Total | \$1,554,620 | \$1,888,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Rd | To Limit: | Avery Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ 60,833 | 10% | | \$6,083 |
| | Roundabout | \$ 601,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$6,577 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Rd | To Limit: | Avery Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL+SBR+EBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$32,883 | \$34,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$328,833 | \$342,000 |
| Contingency | \$39,460 | \$41,000 |
| Total | \$401,177 | \$417,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Rd | To Limit: | Avery Rd |
| County: | Cherokee | Area: | Urban |

Improvement: Roundabout

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ - | 10% | | \$0 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 625,000 | \$ 625,000 | 10% | | \$62,500 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.25 | \$31,250 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$12,500 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|----------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Avery Rd | To Limit: | Avery Rd |
| County: | Cherokee | Area: | Urban |

Improvement: Roundabout

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2035 |
| Right of Way | 2039 |
| Construction | 2039 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$62,500 | \$86,000 |
| Right of Way | \$31,250 | \$46,000 |
| Construction | \$625,000 | \$929,000 |
| Contingency | \$75,000 | \$111,000 |
| Total | \$793,750 | \$1,172,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|------------------|-----------------|------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Johnson Brady Rd | To Limit: | Johnson Brady Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|------------------|-----------------|------------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Johnson Brady Rd | To Limit: | Johnson Brady Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2039 |
| Right of Way | 2039 |
| Construction | 2039 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$40,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$398,000 |
| Contingency | \$32,160 | \$48,000 |
| Total | \$326,960 | \$486,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Beavers Rd | To Limit: | Beavers Rd |
| County: | Cherokee | Area: | Urban |

Improvement: SBR + NBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ 133,833 | 10% | | \$13,383 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$8,037 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Beavers Rd | To Limit: | Beavers Rd |
| County: | Cherokee | Area: | Urban |

Improvement: SBR + NBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$40,183 | \$49,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$401,833 | \$490,000 |
| Contingency | \$48,220 | \$59,000 |
| Total | \$490,237 | \$598,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|---------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Haley Farm Rd | To Limit: | Haley Farm Rd |
| County: | Cherokee | Area: | Urban |

Improvement: EBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ - | 10% | | \$0 |
| | Turning Lanes - Right | \$ 487 | \$ 133,833 | 10% | | \$13,383 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$2,677 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|---------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Haley Farm Rd | To Limit: | Haley Farm Rd |
| County: | Cherokee | Area: | Urban |

Improvement: EBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2029 |
| Right of Way | 2029 |
| Construction | 2029 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$13,383 | \$16,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$133,833 | \$163,000 |
| Contingency | \$16,060 | \$20,000 |
| Total | \$163,277 | \$199,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|---------------|-----------------|---------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Water Tank Rd | To Limit: | Water Tank Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|---|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | Diverging Diamond Interchange - New Interchange | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | Turning Lanes - Right | \$ 487 | \$ - | 10% | | \$0 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | Signal - New | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$5,360 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|---------------|-----------------|---------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Water Tank Rd | To Limit: | Water Tank Rd |
| County: | Cherokee | Area: | Urban |

Improvement: NBL

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2039 |
| Right of Way | 2039 |
| Construction | 2039 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$26,800 | \$40,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$268,000 | \$398,000 |
| Contingency | \$32,160 | \$48,000 |
| Total | \$326,960 | \$486,000 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

Input Data Verification

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Macedonia Elem. | To Limit: | Macedonia Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: SBL + Adjust WBR

| Project Elements | Detailed Project Type | Unit | Total Construction Cost | Contingency% | Contingency% Override | Contingency \$ |
|--|--|--------------|-------------------------|--------------|-----------------------|----------------|
| Freeway Widening | N/A | \$ - | \$ - | 35% | | \$0 |
| Arterial Capacity | N/A | \$ 3,569,000 | \$ - | 20% | | \$0 |
| Interchanges & Grade Separations | 2021 | \$ - | \$ - | 30% | | \$0 |
| Intersection Improvements | Turning Lanes - Left | \$ 800 | \$ 268,000 | 10% | | \$26,800 |
| | 2,021 | \$ 487 | \$ 48,667 | 10% | | \$4,867 |
| | Roundabout | \$ 549,000 | \$ - | 10% | | \$0 |
| | 2,021 | \$ 200,000 | \$ - | 10% | | \$0 |
| | Signal - Major Upgrade | \$ 175,000 | \$ - | 10% | | \$0 |
| | Signal - Minor Upgrade | \$ 75,000 | \$ - | 10% | | \$0 |
| | Milling and Resurfacing (per lane per linear ft) | \$ 44 | \$ - | 10% | | \$0 |
| | Speed Hump | \$ 2,130 | \$ - | 10% | | \$0 |
| | Chicanes | \$ 8,050 | \$ - | 10% | | \$0 |
| | Island | \$ 10,460 | \$ - | 10% | | \$0 |
| | Diverter | \$ 22,790 | \$ - | 10% | | \$0 |
| | Street light | \$ 3,600 | \$ - | 10% | | \$0 |
| | Bridges | N/A | \$ - | \$ - | 10% | |
| Active Transportation (Sidewalks, Trails, Bike Lanes) | Multi-Use Trails (Assume 12' wide) - Asphalt | \$ 329,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Assume 12' Wide) - Concrete | \$ 788,000 | \$ - | 10% | | \$0 |
| | Sidewalks Along Project | \$ 312,000 | \$ - | 10% | | \$0 |
| | Bike Lanes in one direction (includes sidewalk) | \$ 833,000 | \$ - | 10% | | \$0 |
| | Bikeway | \$ 833,000 | \$ - | 10% | | \$0 |
| | Multi-Use Trails (Unpaved) | \$ 83,870 | \$ - | 10% | | \$0 |
| | Signed Bicycle Route | \$ 27,240 | \$ - | 10% | | \$0 |
| | High Visibility Crosswalk | \$ 3,070 | \$ - | 10% | | \$0 |
| | Raised Crosswalk | \$ 7,110 | \$ - | 10% | | \$0 |
| | Pedestrian Hybrid Beacon (High Intensity Activated Crosswalk - HAWK) | \$ 51,460 | \$ - | 10% | | \$0 |
| | Rectangular Rapid Flashing Beacons (RRFB) | \$ 14,160 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - Wooden | \$ 122,610 | \$ - | 10% | | \$0 |
| | Pedestrian Overpass - PreFab Steel | \$ 191,400 | \$ - | 10% | | \$0 |
| | Shade shelters | \$ 30,000 | \$ - | 10% | | \$0 |
| | Gazebos | \$ 53,000 | \$ - | 10% | | \$0 |
| | Picnic Tables | \$ 1,683 | \$ - | 10% | | \$0 |
| | Tree Grates | \$ 2,000 | \$ - | 10% | | \$0 |
| | Trees | \$ 460 | \$ - | 10% | | \$0 |
| | Bench | \$ 1,660 | \$ - | 10% | | \$0 |
| | Bus Shelter | \$ 11,490 | \$ - | 10% | | \$0 |
| Trash Receptical | \$ 1,330 | \$ - | 10% | | \$0 | |
| Bicycle signal | \$ 12,800 | \$ - | 10% | | \$0 | |
| Walls (Sound Barrier, Retaining) | N/A | \$ - | \$ - | 10% | | \$0 |
| Intelligent Transportation Systems (ITS) | N/A | \$ - | \$ - | 5% | | \$0 |

| ROW | Unit (acres) | Total ROW Cost |
|--------------------------|--------------|----------------|
| Right-of-Way Acquisition | 0.00 | \$0 |

| Environmental Mitigation | Default Percentage | Contingency Override percentage | Environmental Mitigation |
|--------------------------|--------------------|---------------------------------|--------------------------|
| Environmental Mitigation | 2% | | \$6,333 |

**ATLANTA REGIONAL COMMISSION
PLANNING LEVEL COST ESTIMATION TOOL**

PLANNING LEVEL COST ESTIMATION TOOL

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Project Name: | E Cherokee Dr | ARC Project ID: | N/A |
| From Limit: | Macedonia Elem. | To Limit: | Macedonia Elem. |
| County: | Cherokee | Area: | Urban |

Improvement: SBL + Adjust WBR

| Activity | Begin (Year) |
|-------------------------|--------------|
| Preliminary Engineering | 2021 |
| Right of Way | 2021 |
| Construction | 2021 |

| Default Annual Inflation Rate | Override |
|-------------------------------|----------|
| 2% | 0% |

| Current Year |
|--------------|
| 2019 |

| ESTIMATED PROJECT COST | | |
|-------------------------|------------------|---------------------|
| Activity | Base Estimate | Year of Expenditure |
| Preliminary Engineering | \$31,667 | \$33,000 |
| Right of Way | \$0 | \$0 |
| Construction | \$316,667 | \$329,000 |
| Contingency | \$38,000 | \$39,000 |
| Total | \$386,333 | \$401,000 |

Appendix G: Turn Lane Warrant and Signal Warrant Analysis



Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

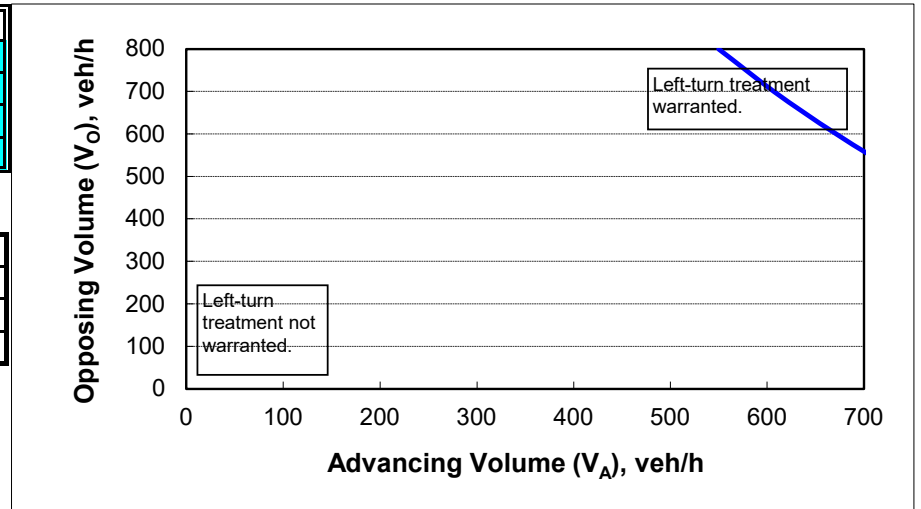
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 30 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 481 |
| Opposing volume (V_O), veh/h: | 875 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 511 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

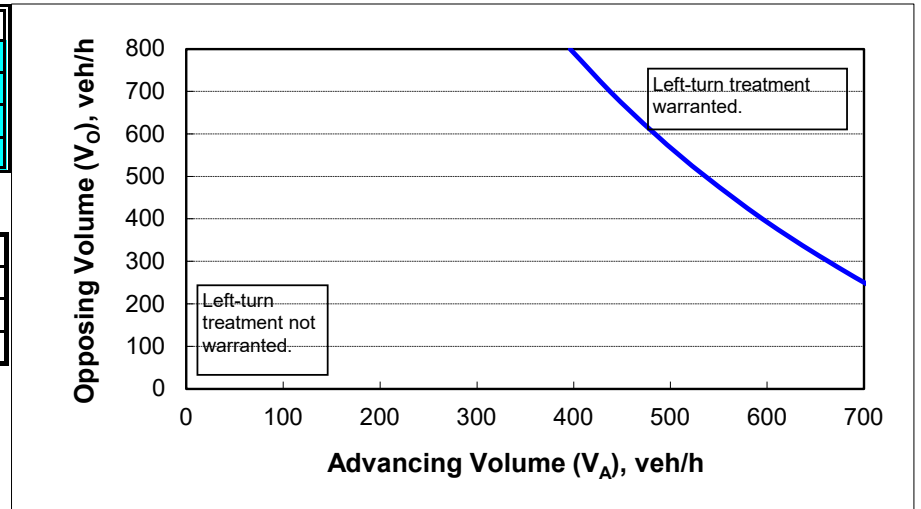
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 902 |
| Opposing volume (V_O), veh/h: | 776 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 406 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 2008 |
| Percentage of right-turns on minor road, %: | 86% |
| Minor-road volume (one direction), veh/h: | 43 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 120 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

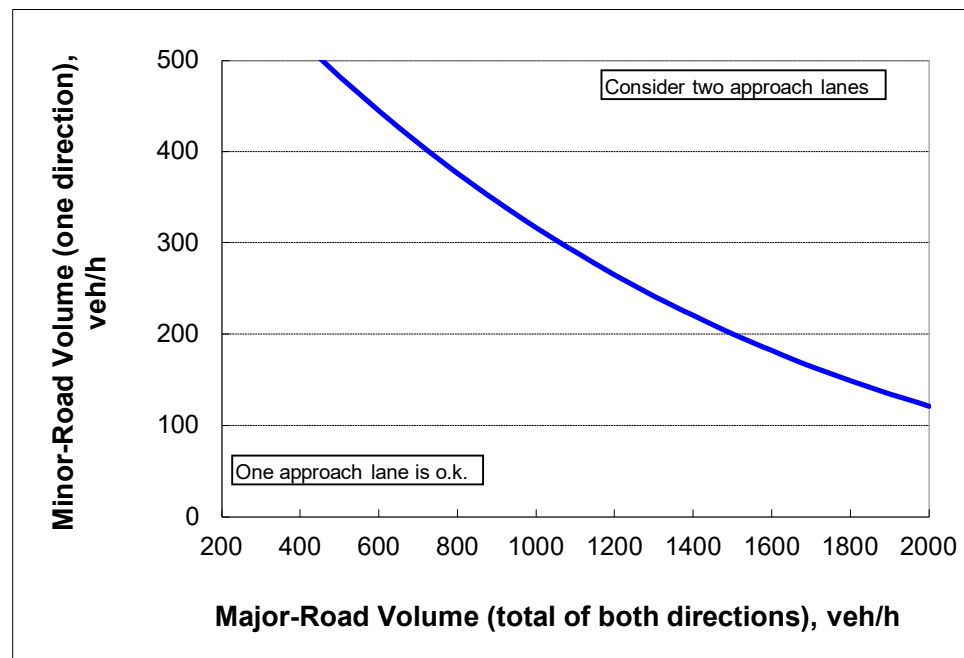


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 2476 |
| Percentage of right-turns on minor road, %: | 96% |
| Minor-road volume (one direction), veh/h: | 24 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 114 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

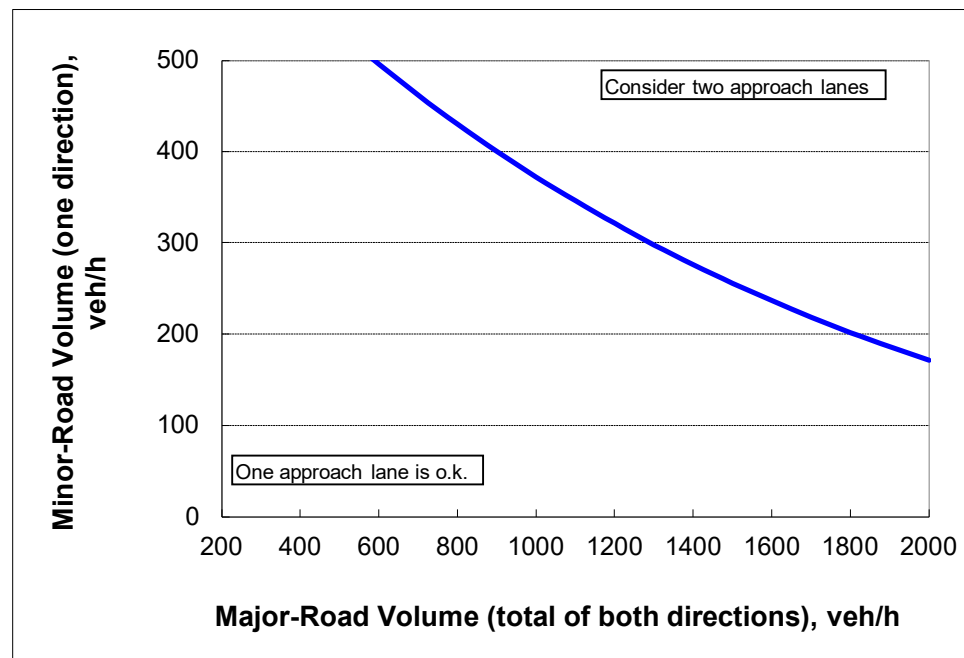


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 30 |
| Major-road volume (one direction), veh/h: | 1298 |
| Right-turn volume, veh/h: | 4 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 6 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

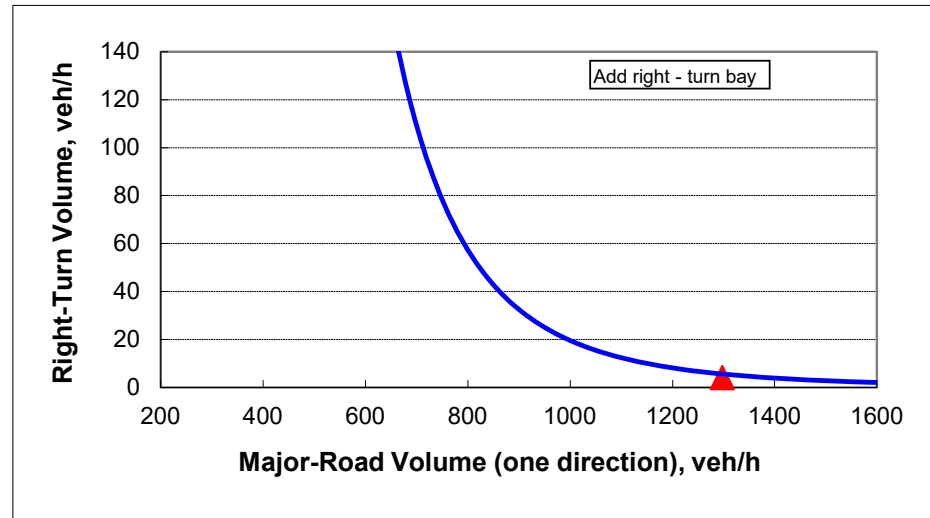


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 1149 |
| Right-turn volume, veh/h: | 7 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 9 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

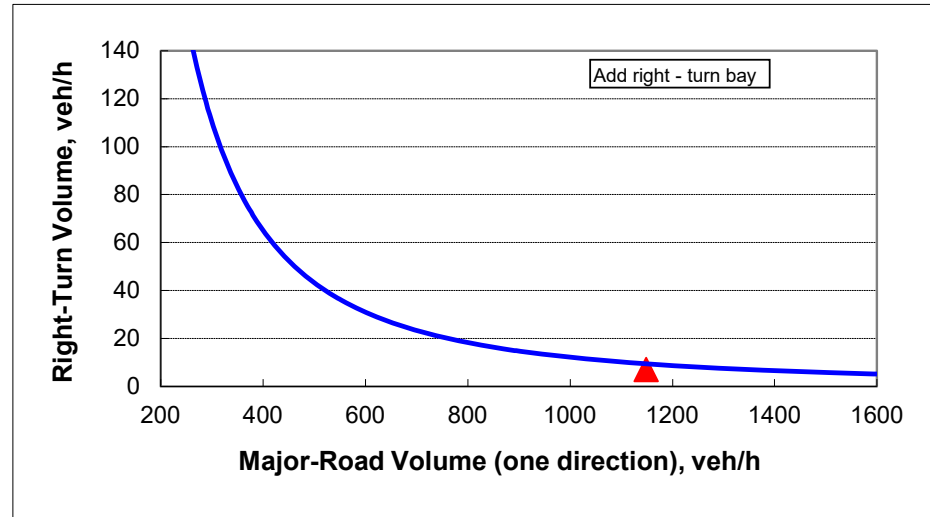


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

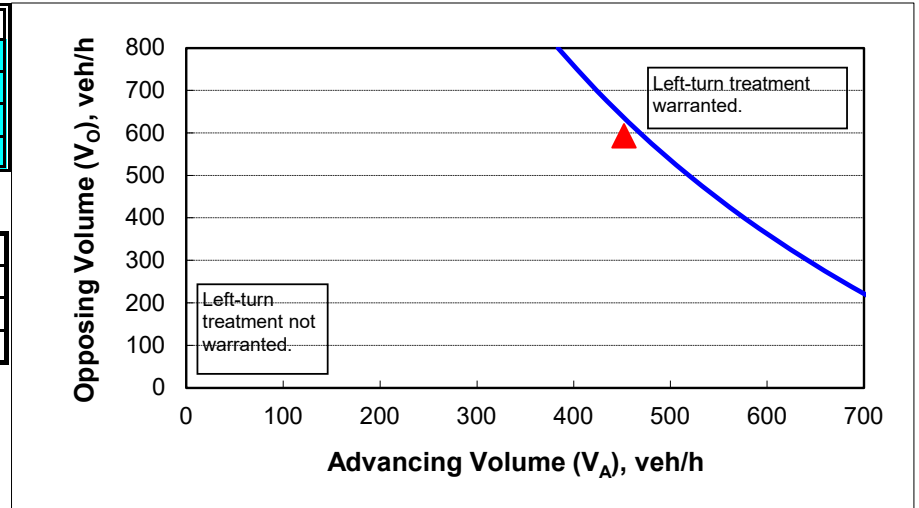
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 452 |
| Opposing volume (V_O), veh/h: | 593 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 472 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

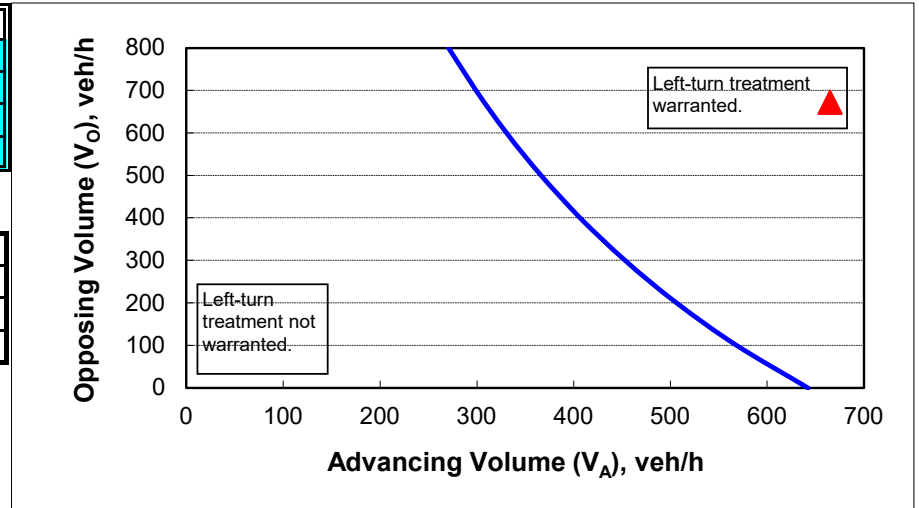
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 7% |
| Advancing volume (V_A), veh/h: | 665 |
| Opposing volume (V_O), veh/h: | 672 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 308 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

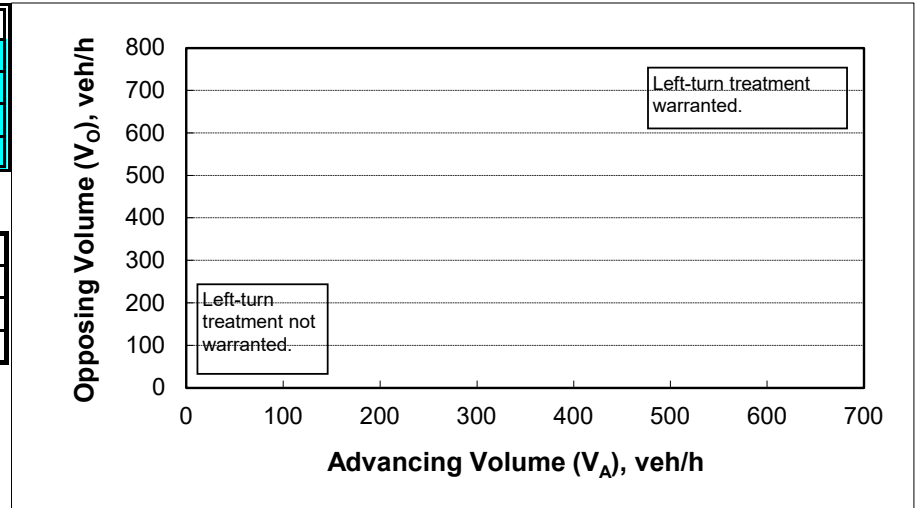
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 865 |
| Opposing volume (V_O), veh/h: | 788 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 918 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

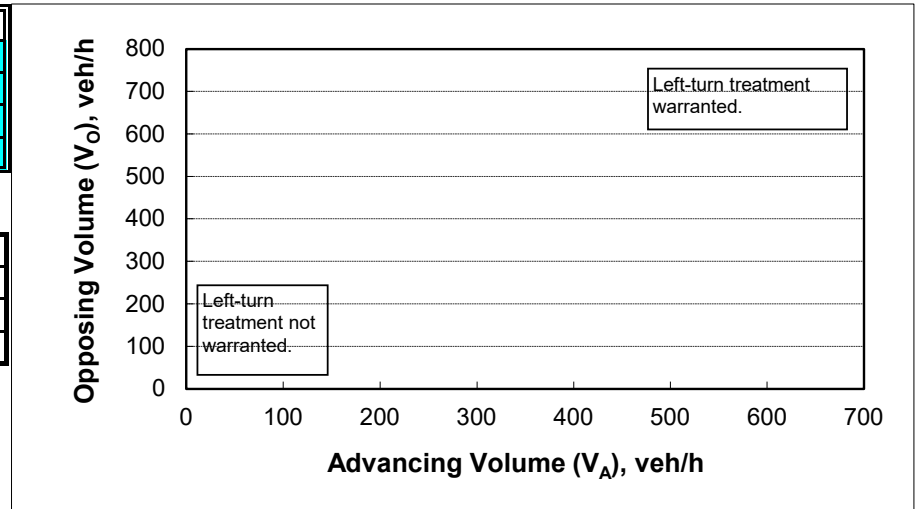
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 882 |
| Opposing volume (V_O), veh/h: | 647 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 2379 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

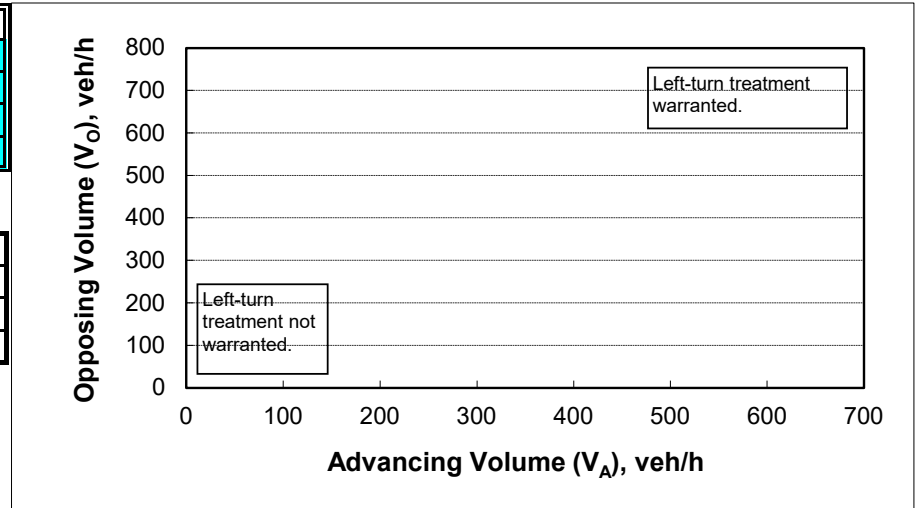
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 1003 |
| Opposing volume (V_O), veh/h: | 912 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 875 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1551 |
| Percentage of right-turns on minor road, %: | 63% |
| Minor-road volume (one direction), veh/h: | 123 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 126 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

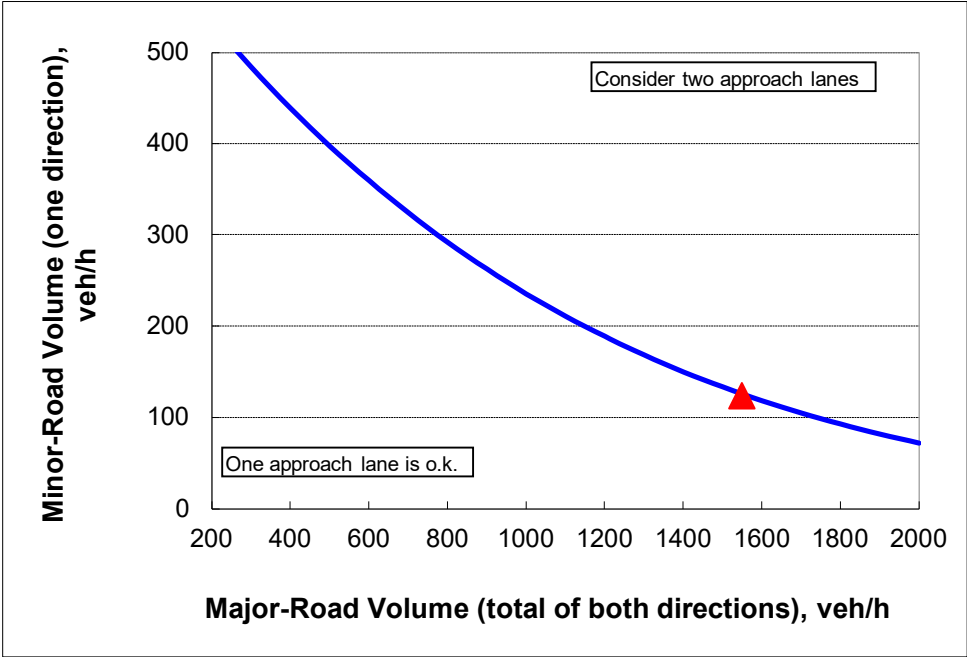


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1983 |
| Percentage of right-turns on minor road, %: | 75% |
| Minor-road volume (one direction), veh/h: | 56 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 93 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

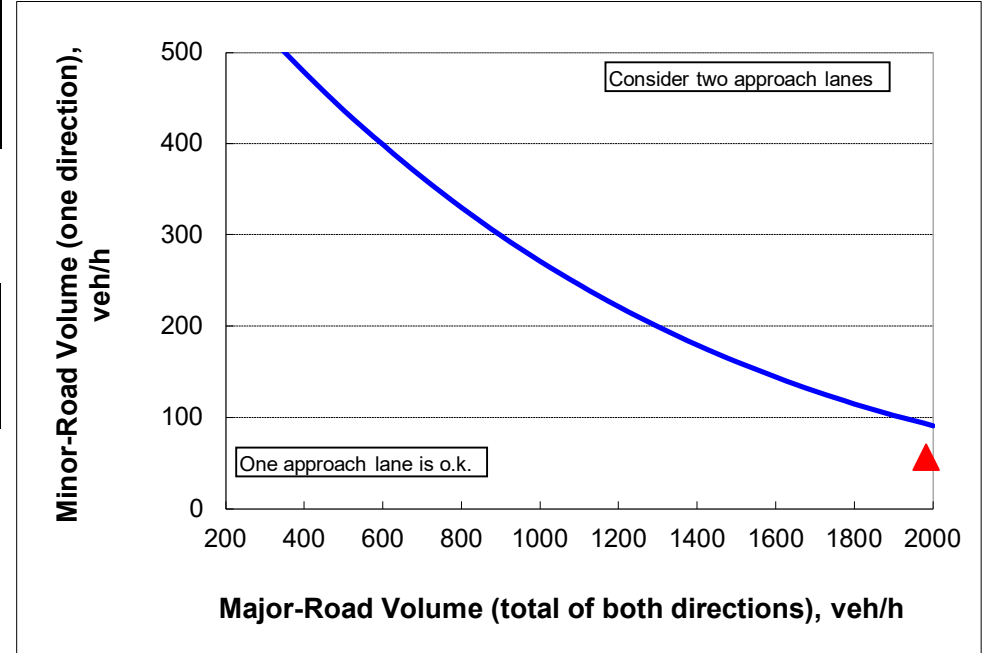


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1551 |
| Percentage of right-turns on minor road, %: | 46% |
| Minor-road volume (one direction), veh/h: | 24 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 99 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

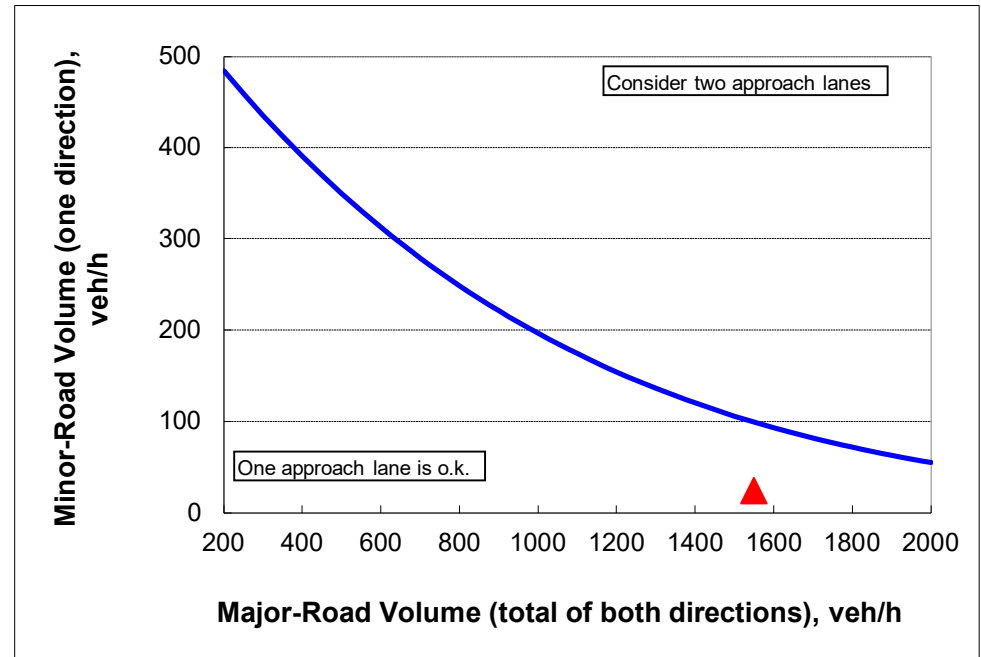


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1983 |
| Percentage of right-turns on minor road, %: | 20% |
| Minor-road volume (one direction), veh/h: | 10 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 42 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

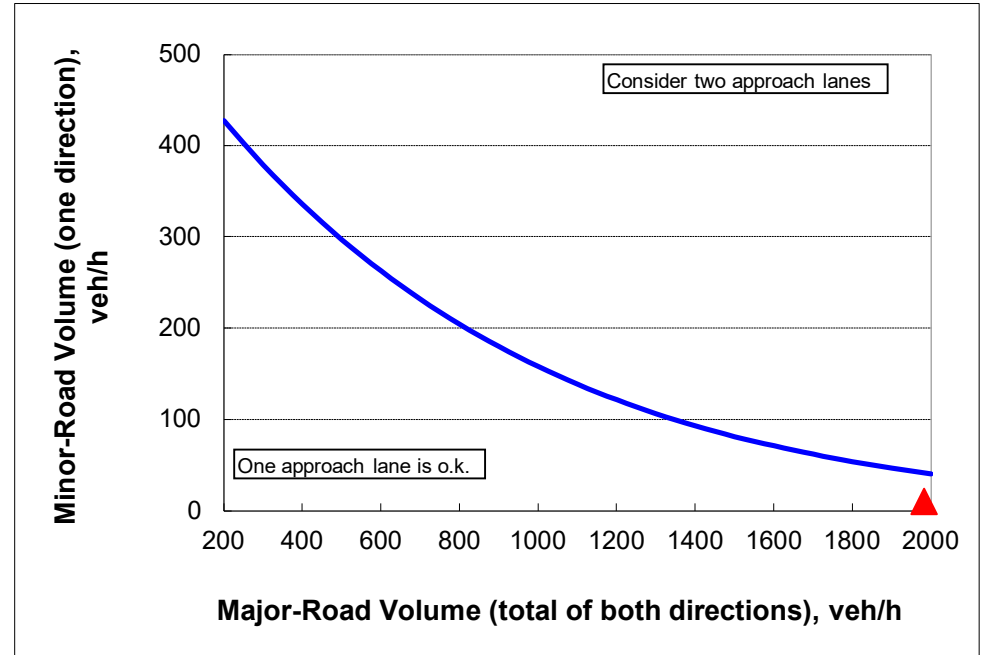


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 564 |
| Right-turn volume, veh/h: | 11 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 35 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

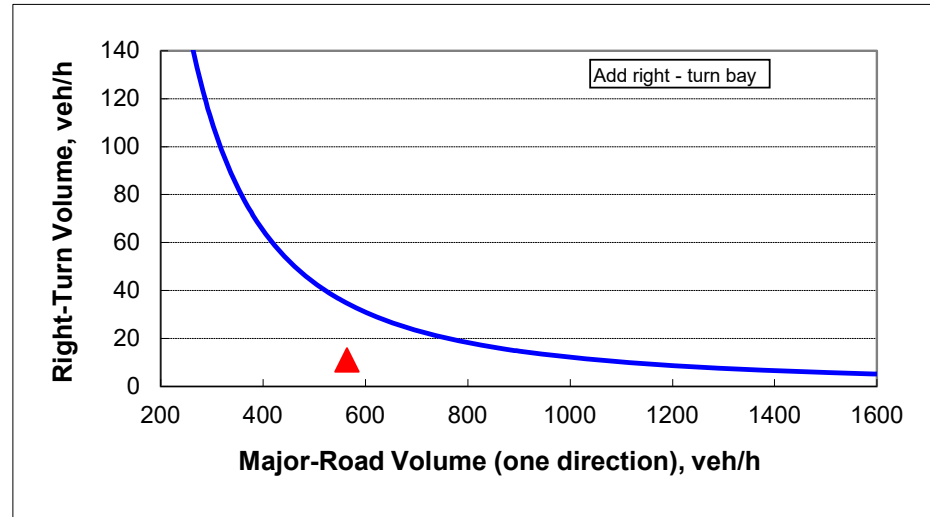


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 677 |
| Right-turn volume, veh/h: | 16 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 25 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

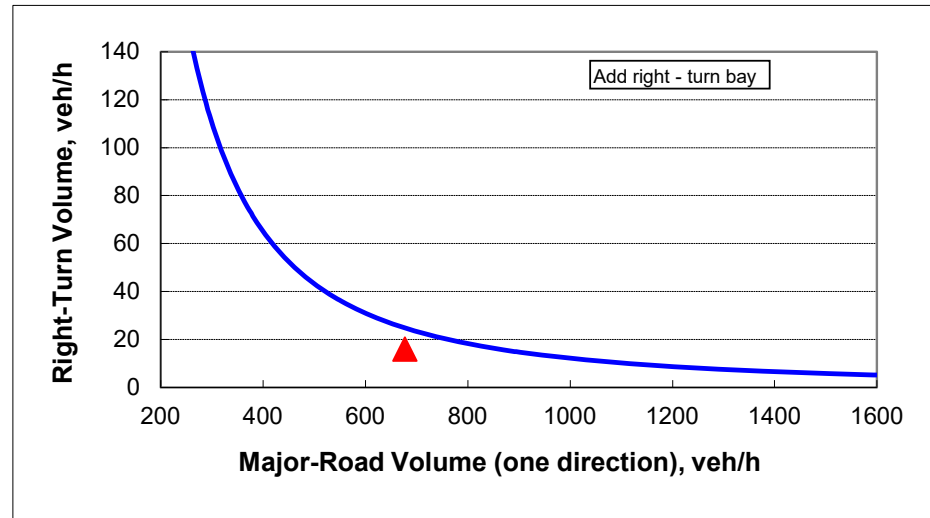


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 760 |
| Right-turn volume, veh/h: | 14 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 20 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

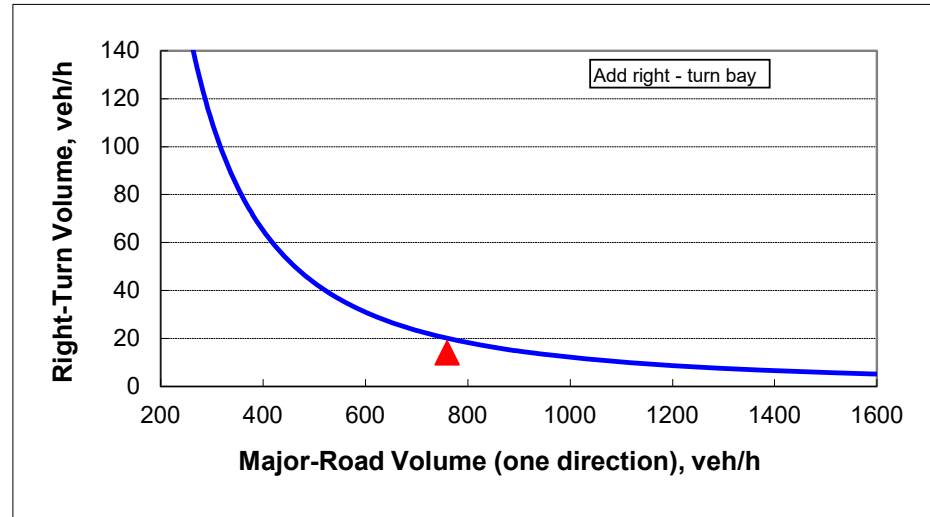


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 865 |
| Right-turn volume, veh/h: | 20 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 16 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

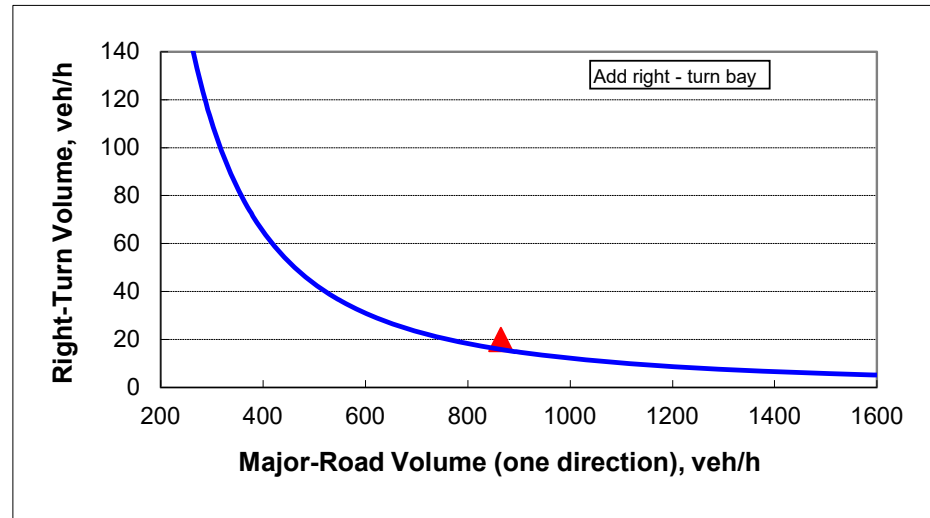


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 452 |
| Right-turn volume, veh/h: | 6 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 52 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

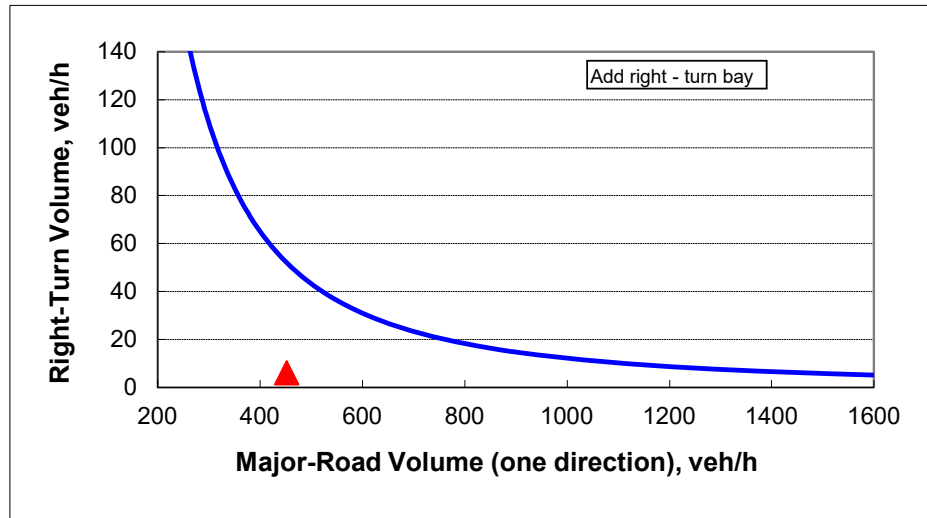


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 665 |
| Right-turn volume, veh/h: | 17 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 26 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

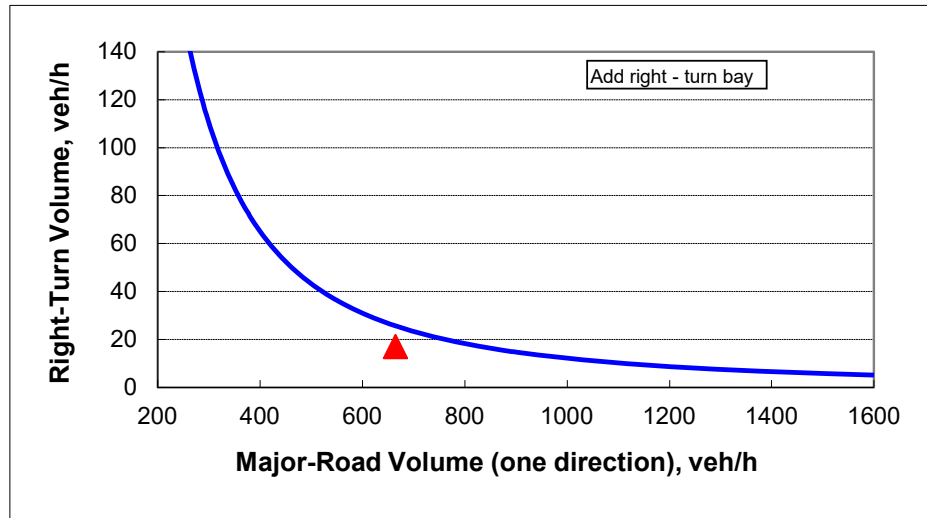


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 452 |
| Right-turn volume, veh/h: | 6 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 52 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

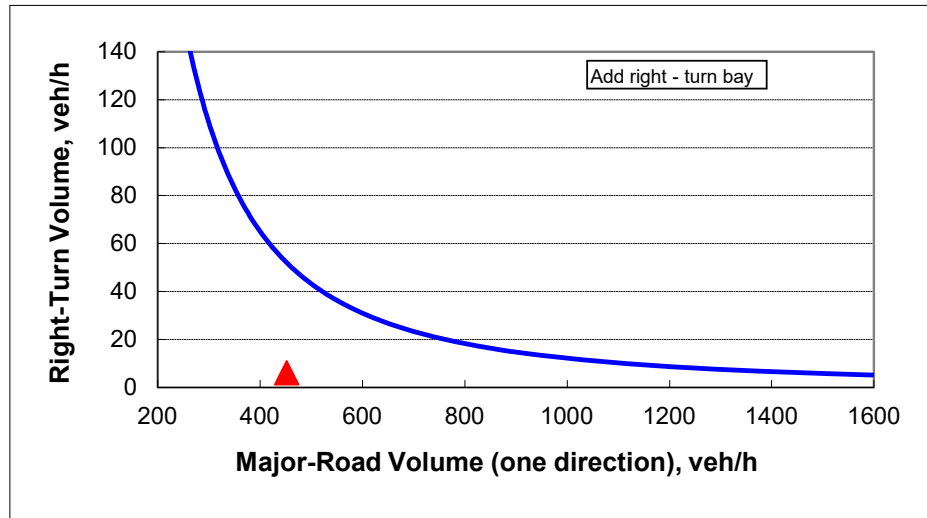


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 847 |
| Right-turn volume, veh/h: | 17 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 16 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

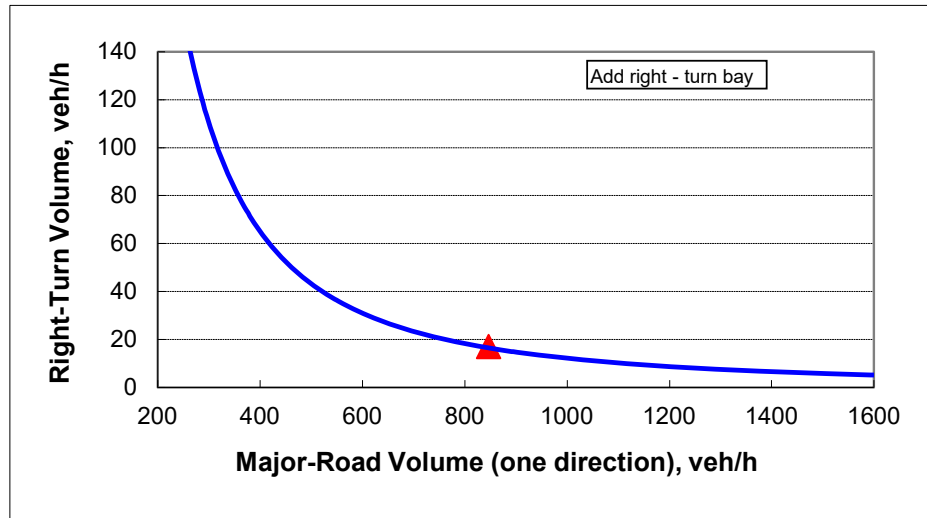


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

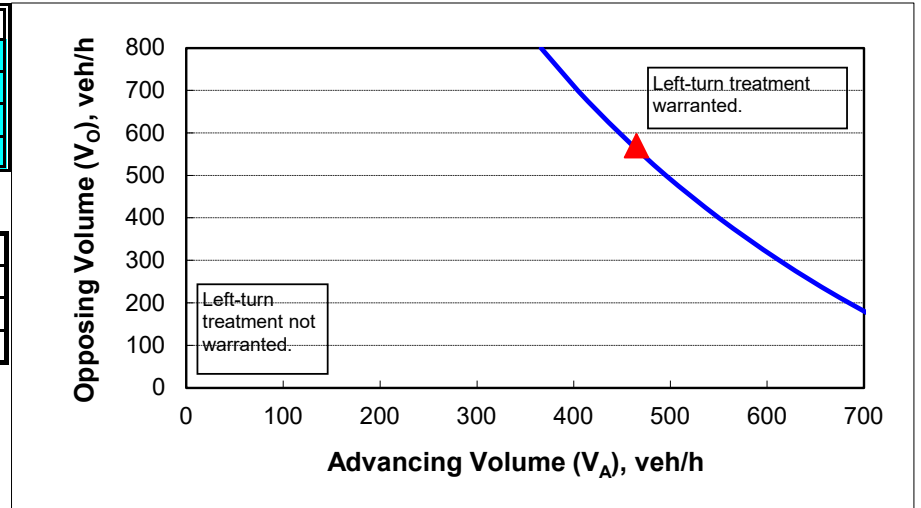
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 4% |
| Advancing volume (V_A), veh/h: | 465 |
| Opposing volume (V_O), veh/h: | 570 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 461 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

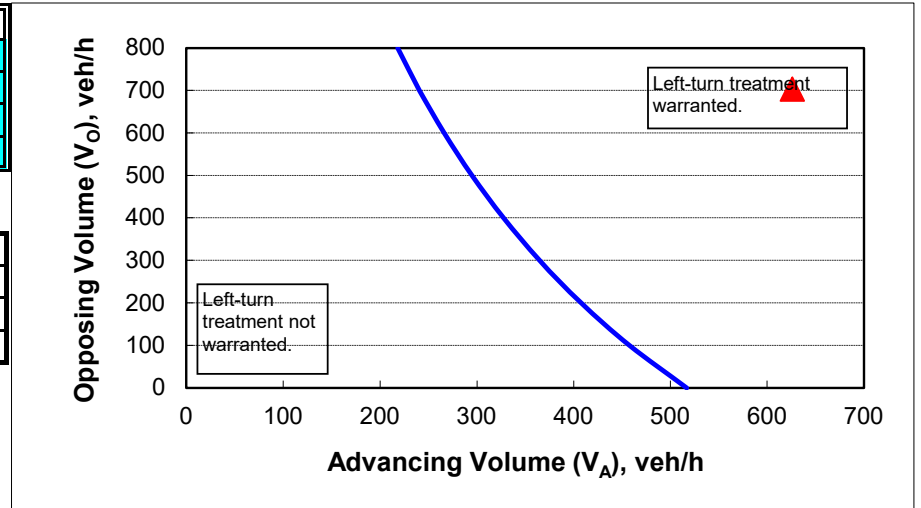
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 11% |
| Advancing volume (V_A), veh/h: | 626 |
| Opposing volume (V_O), veh/h: | 703 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 240 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1035 |
| Percentage of right-turns on minor road, %: | 23% |
| Minor-road volume (one direction), veh/h: | 191 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 155 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

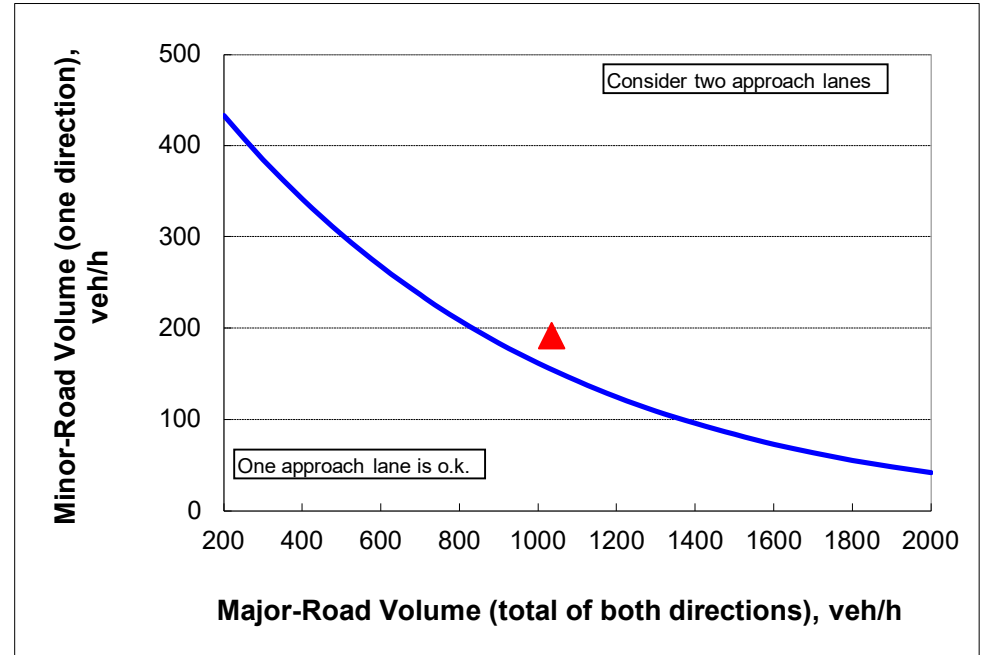


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1329 |
| Percentage of right-turns on minor road, %: | 42% |
| Minor-road volume (one direction), veh/h: | 79 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 126 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

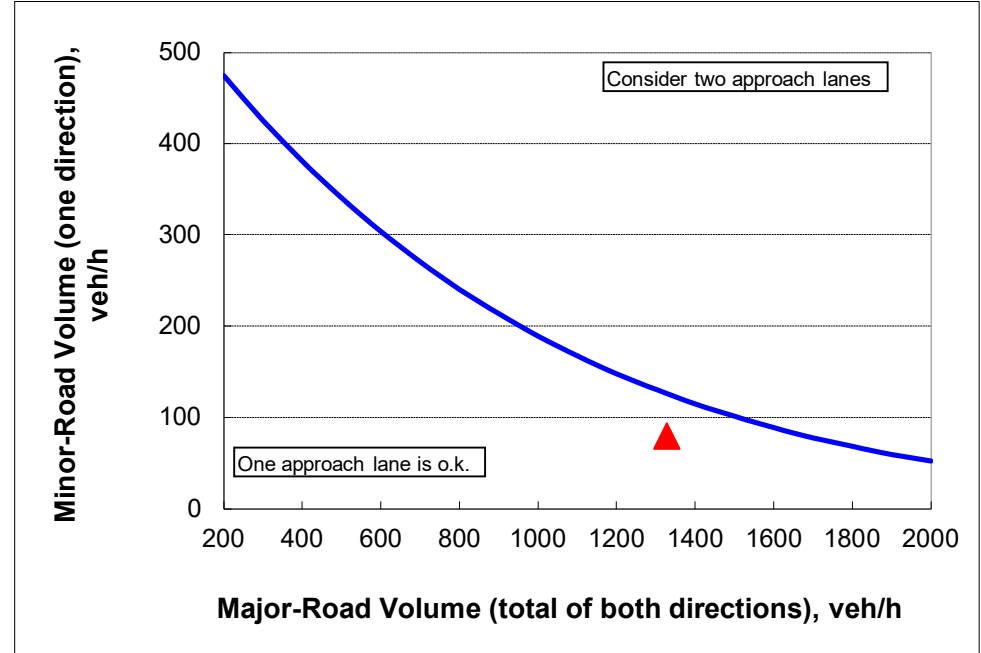


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 570 |
| Right-turn volume, veh/h: | 35 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 34 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

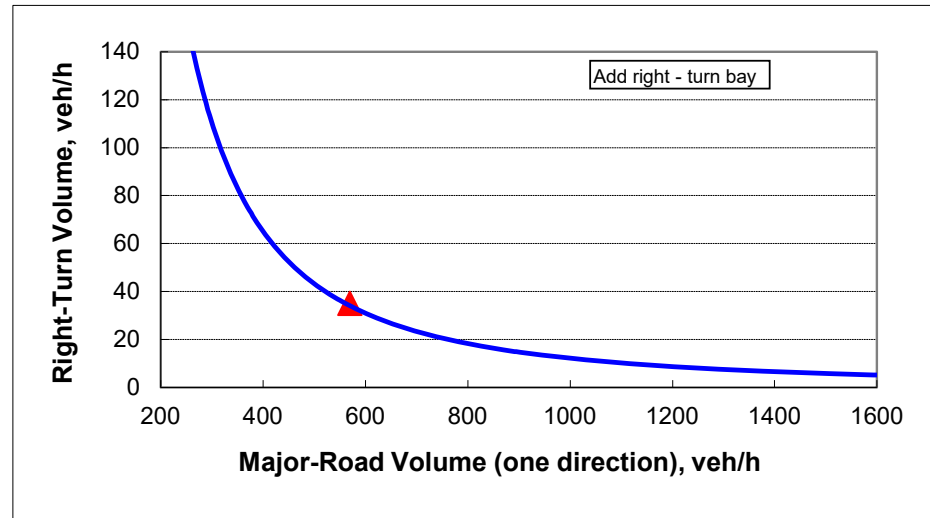


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 703 |
| Right-turn volume, veh/h: | 87 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 23 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

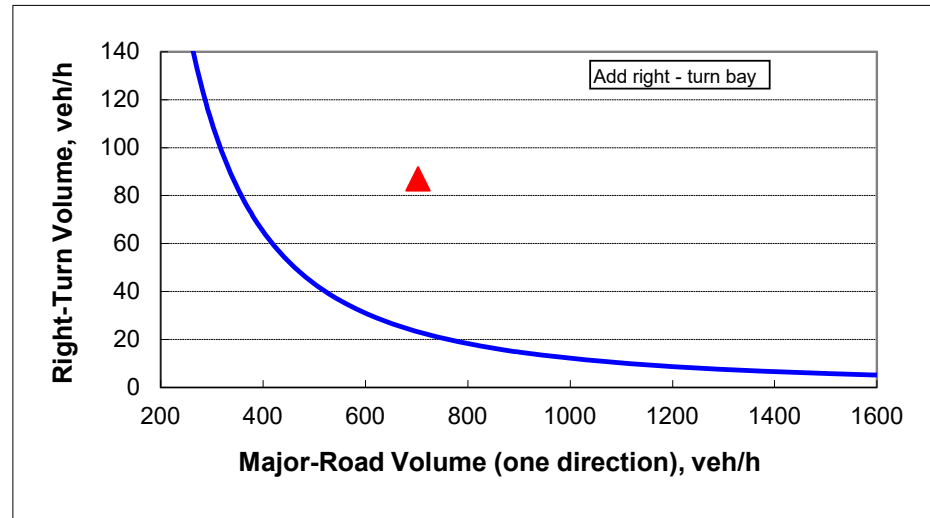


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

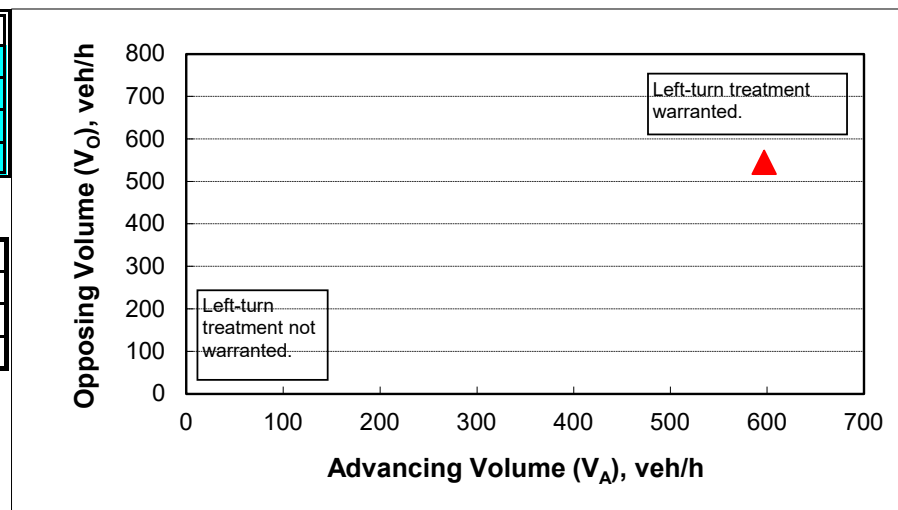
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 597 |
| Opposing volume (V_O), veh/h: | 545 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1536 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

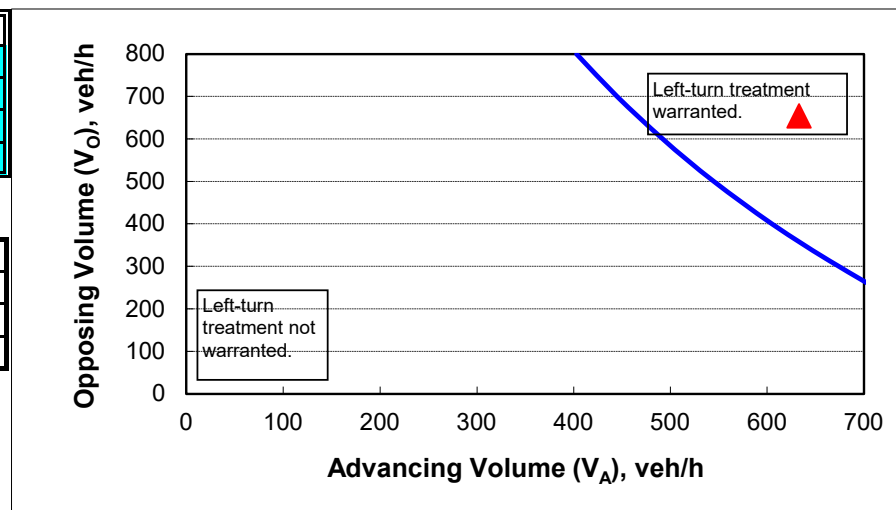
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 633 |
| Opposing volume (V_O), veh/h: | 654 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 466 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 551 |
| Opposing volume (V_O), veh/h: | 595 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 813 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |

CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

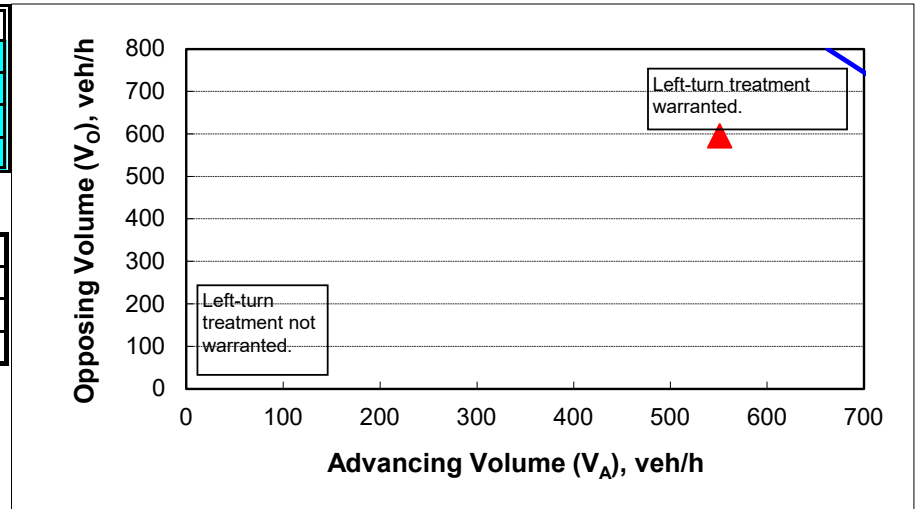


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

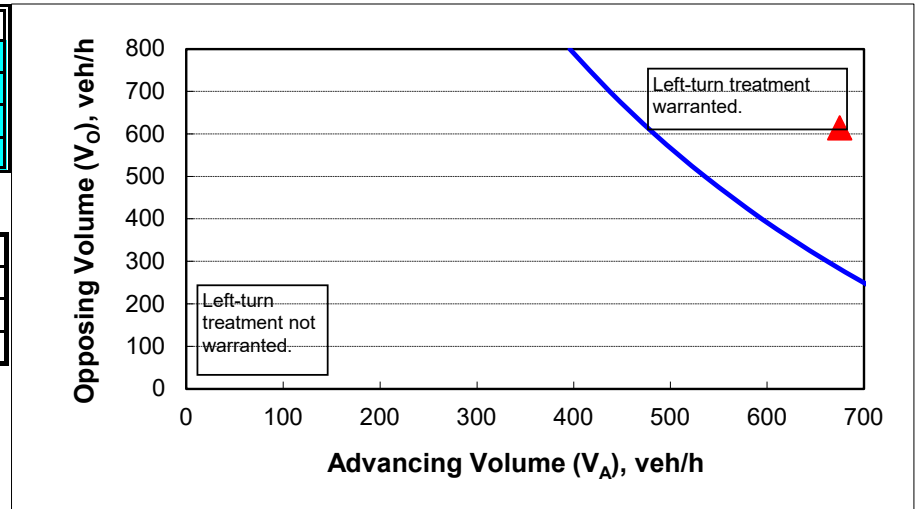
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 675 |
| Opposing volume (V_O), veh/h: | 614 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 477 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1694 |
| Percentage of right-turns on minor road, %: | 76% |
| Minor-road volume (one direction), veh/h: | 21 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 133 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

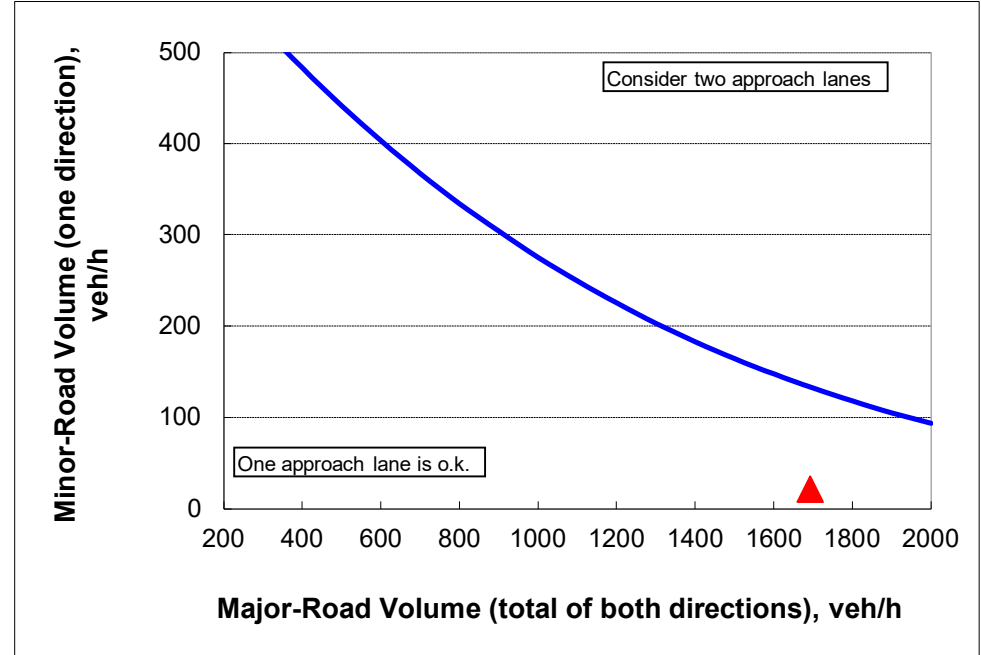


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1904 |
| Percentage of right-turns on minor road, %: | 70% |
| Minor-road volume (one direction), veh/h: | 10 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 92 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

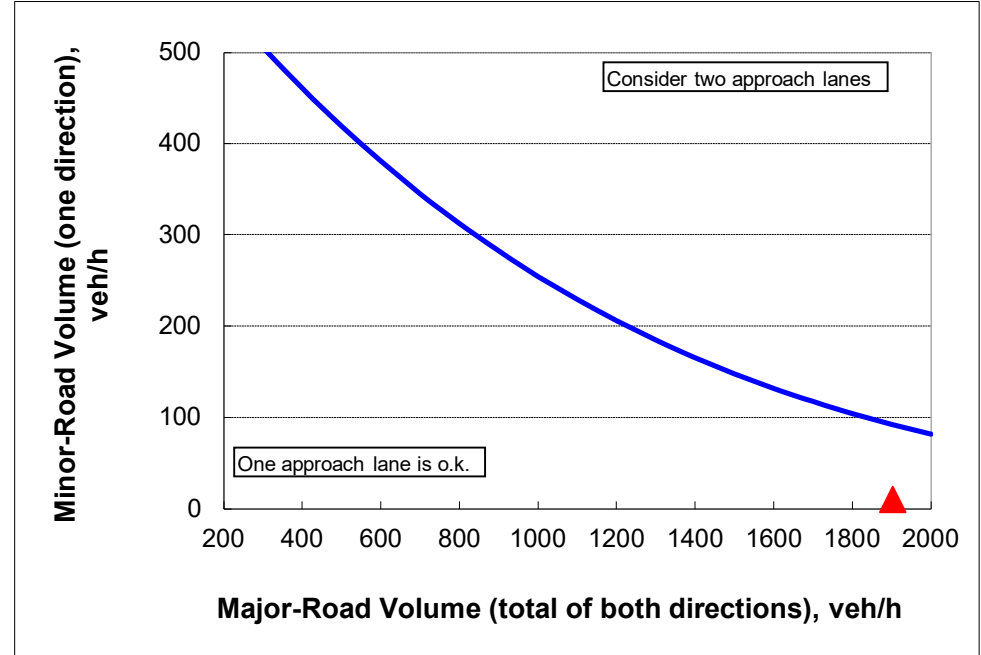


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1694 |
| Percentage of right-turns on minor road, %: | 56% |
| Minor-road volume (one direction), veh/h: | 41 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 95 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

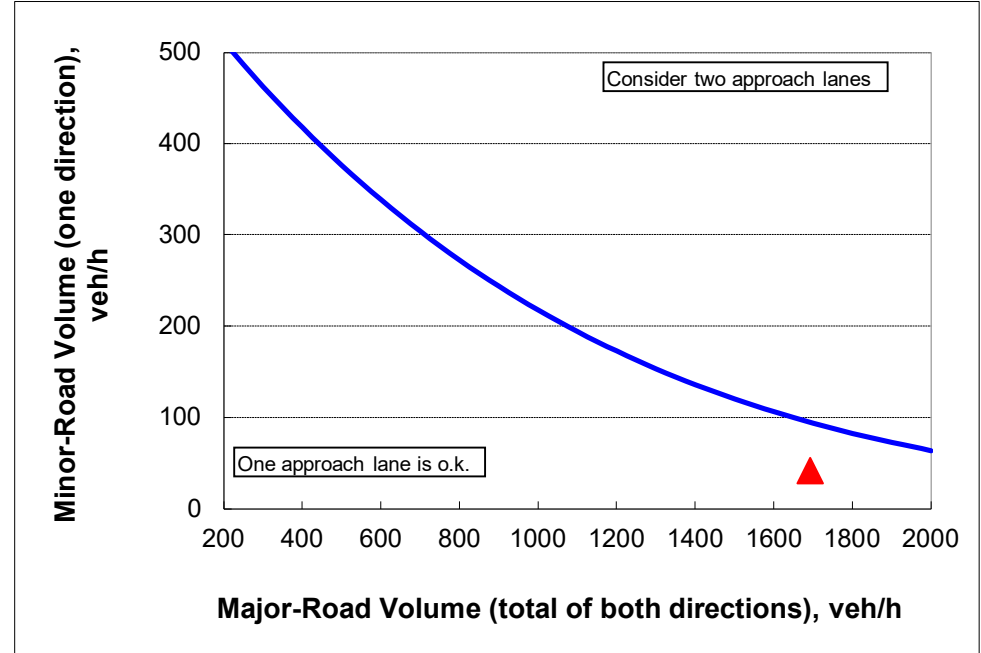


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1904 |
| Percentage of right-turns on minor road, %: | 24% |
| Minor-road volume (one direction), veh/h: | 38 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 48 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

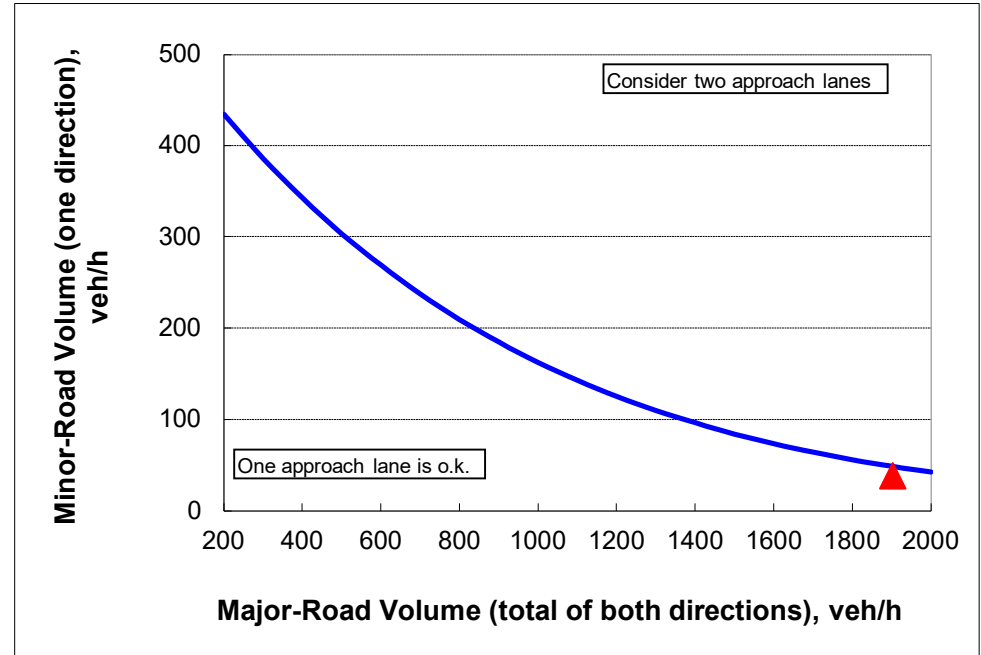


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 597 |
| Right-turn volume, veh/h: | 10 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 31 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

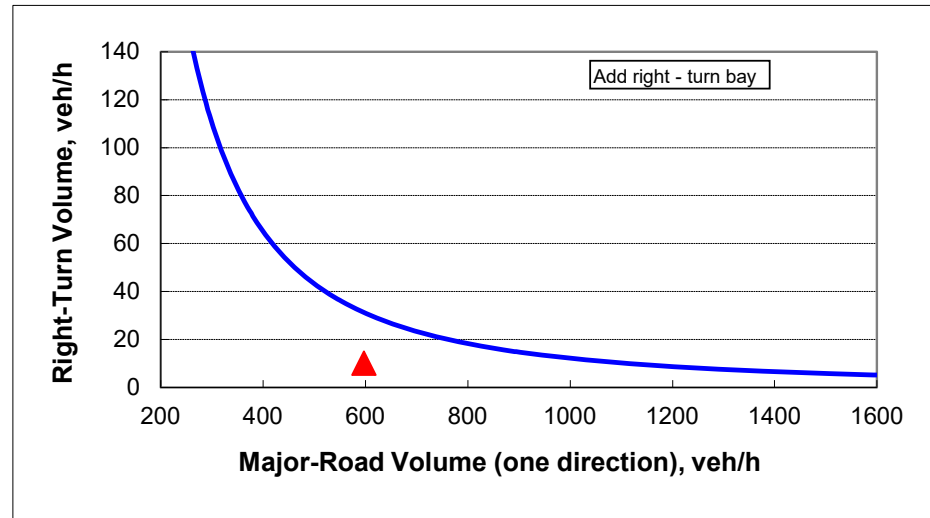


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 633 |
| Right-turn volume, veh/h: | 37 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 28 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

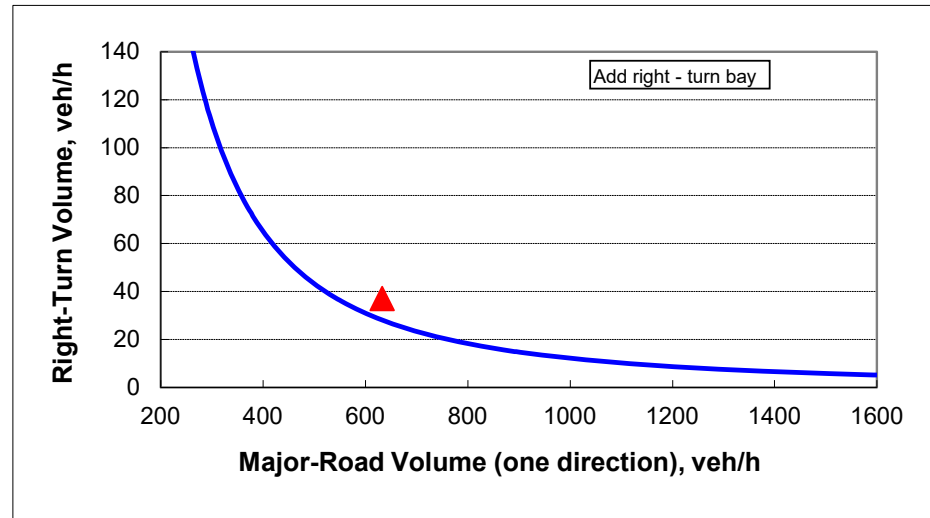


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 813 |
| Right-turn volume, veh/h: | 5 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 18 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

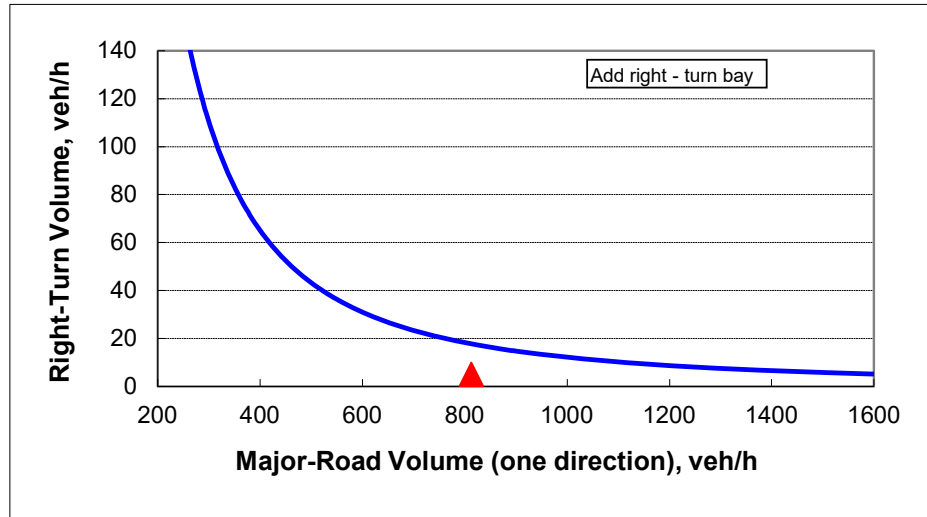


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 990 |
| Right-turn volume, veh/h: | 5 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 12 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

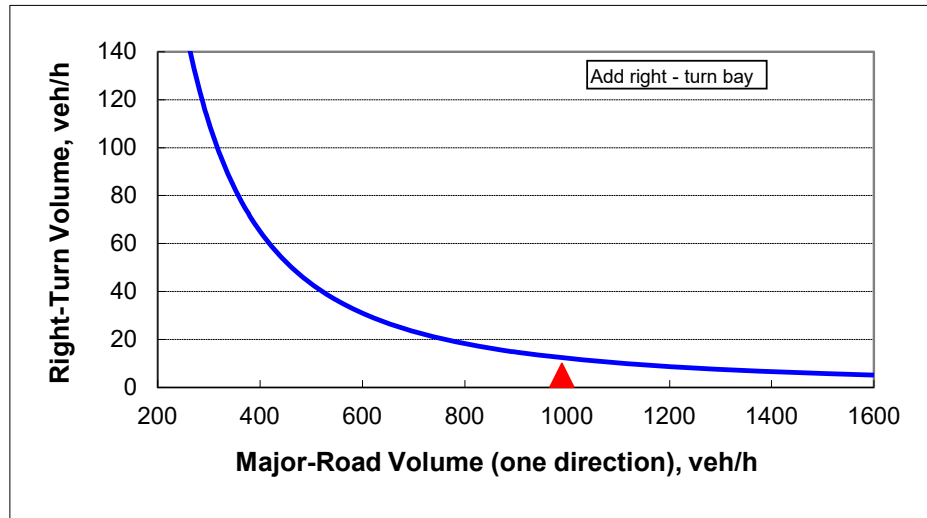


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

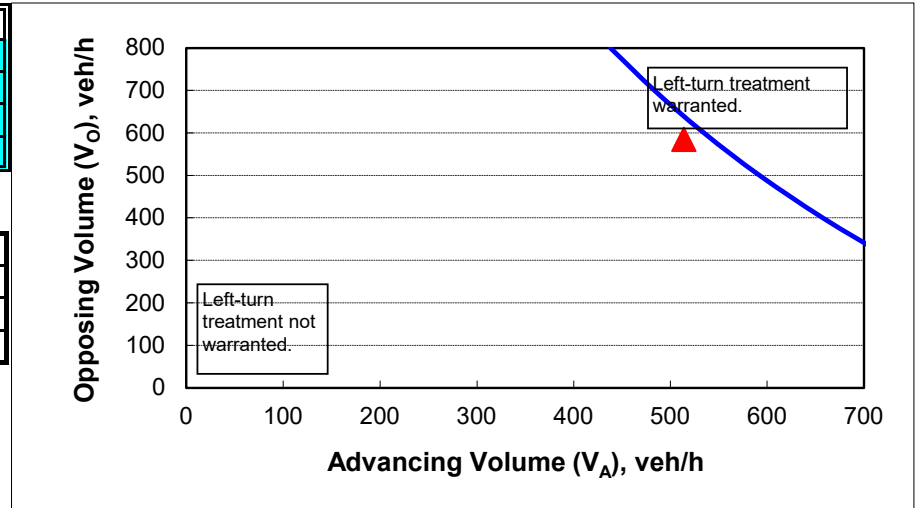
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 514 |
| Opposing volume (V_O), veh/h: | 585 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 543 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

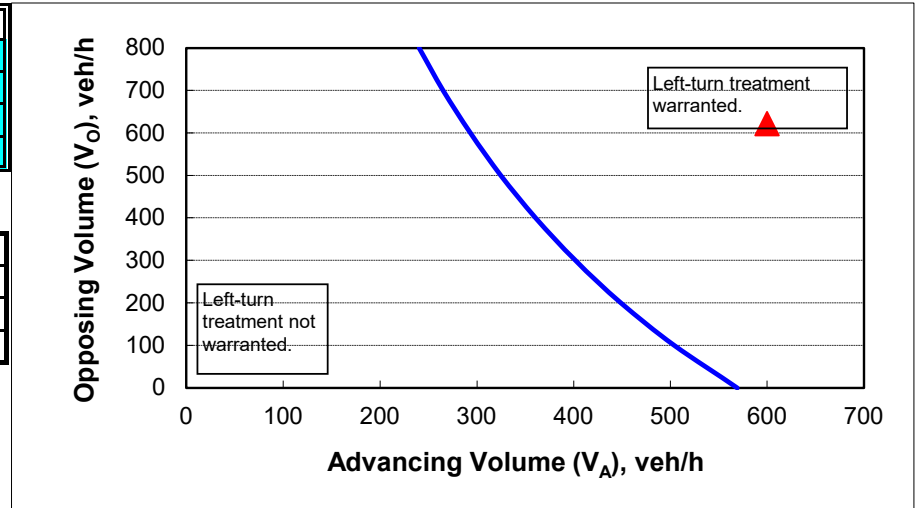
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 9% |
| Advancing volume (V_A), veh/h: | 600 |
| Opposing volume (V_O), veh/h: | 622 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 287 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1398 |
| Percentage of right-turns on minor road, %: | 44% |
| Minor-road volume (one direction), veh/h: | 100 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 118 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

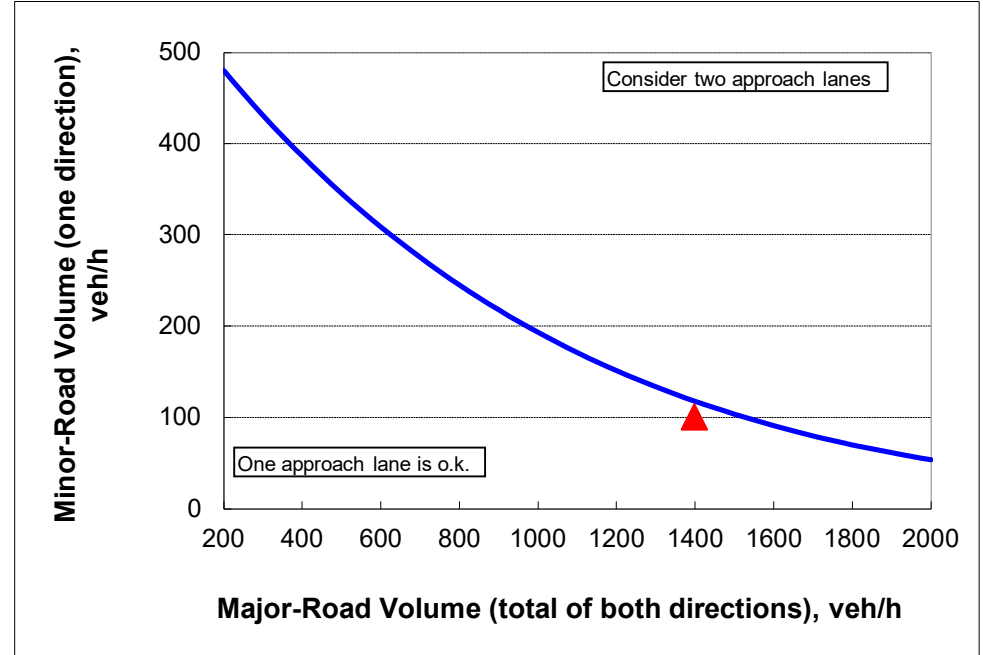


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1618 |
| Percentage of right-turns on minor road, %: | 44% |
| Minor-road volume (one direction), veh/h: | 100 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 89 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

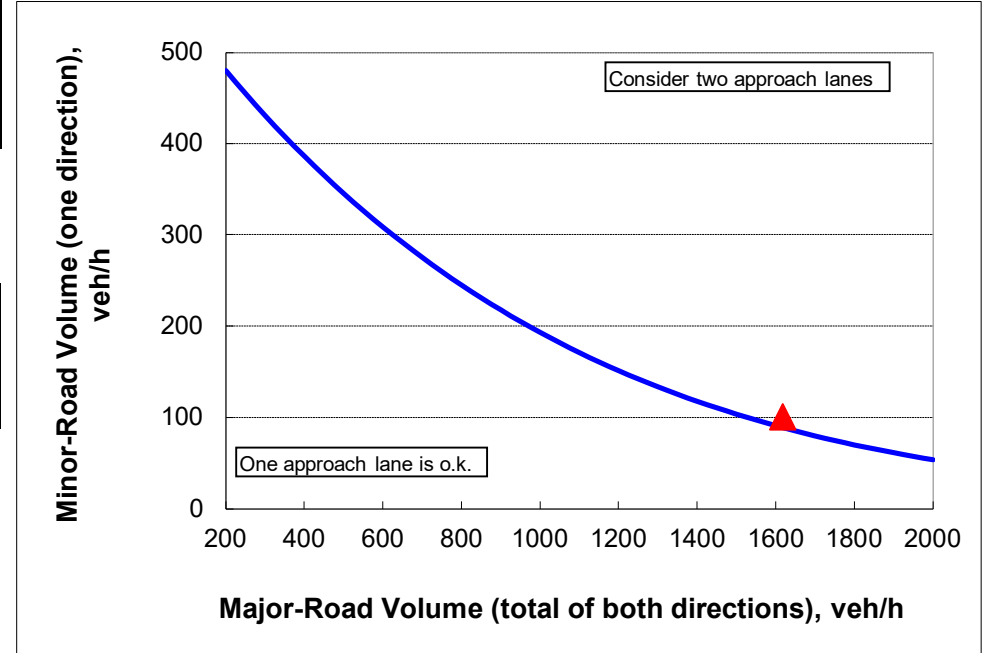


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1761 |
| Percentage of right-turns on minor road, %: | 61% |
| Minor-road volume (one direction), veh/h: | 71 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 93 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

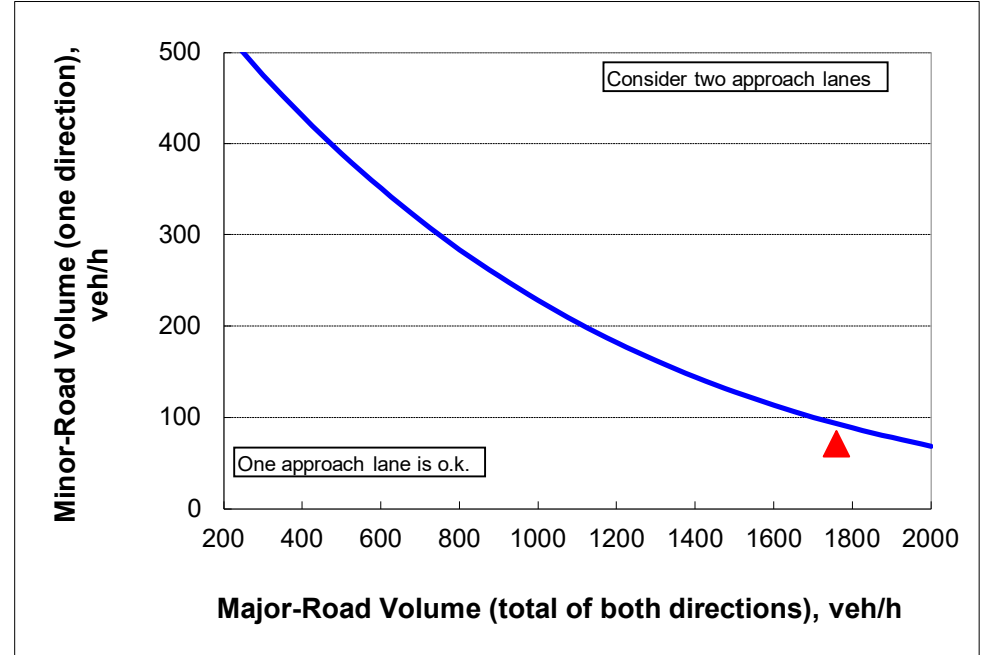


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

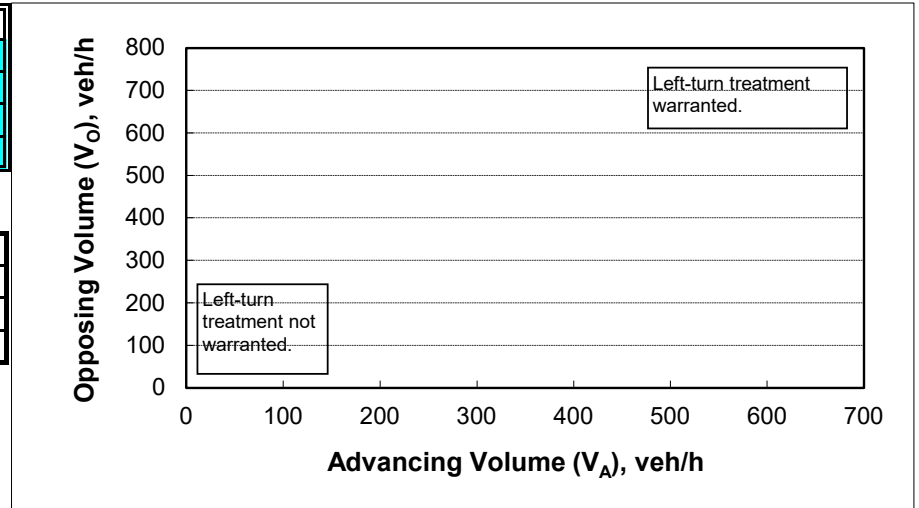
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 840 |
| Opposing volume (V_O), veh/h: | 819 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1385 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

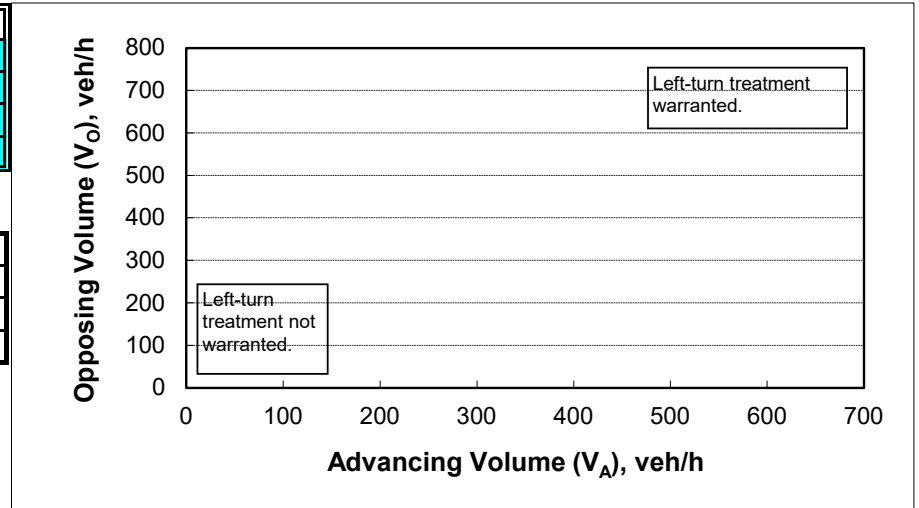
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 916 |
| Opposing volume (V_O), veh/h: | 850 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 704 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1659 |
| Percentage of right-turns on minor road, %: | 32% |
| Minor-road volume (one direction), veh/h: | 28 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 74 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

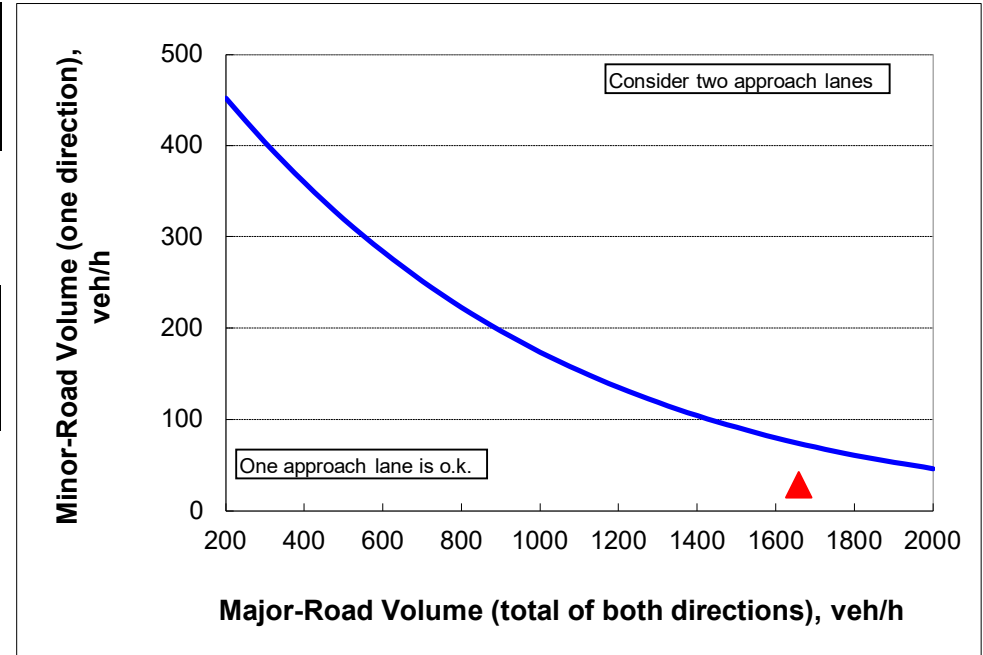


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1766 |
| Percentage of right-turns on minor road, %: | 61% |
| Minor-road volume (one direction), veh/h: | 18 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 93 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

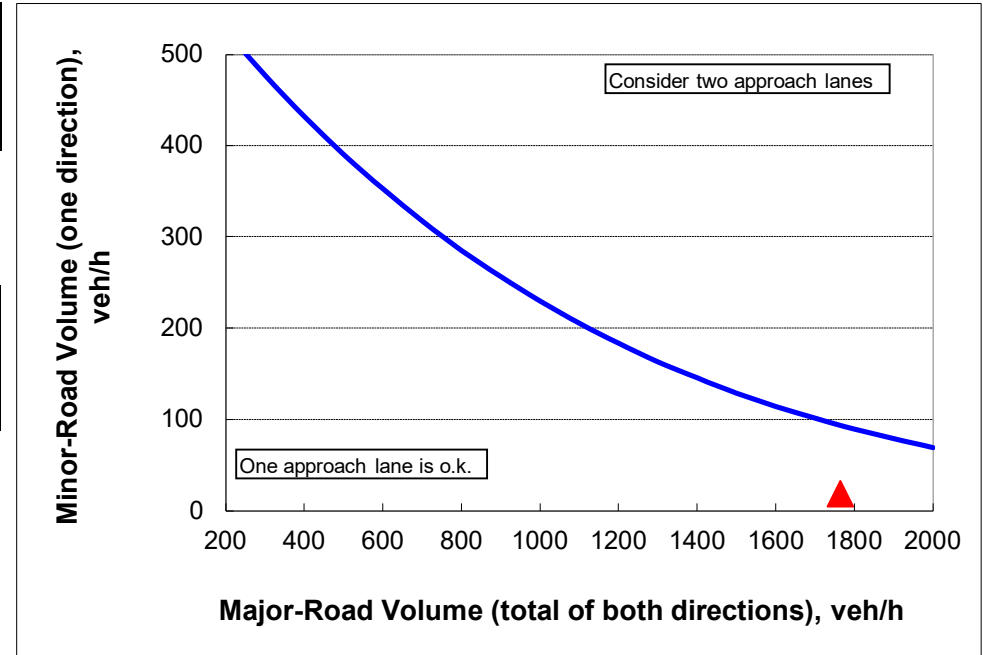


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

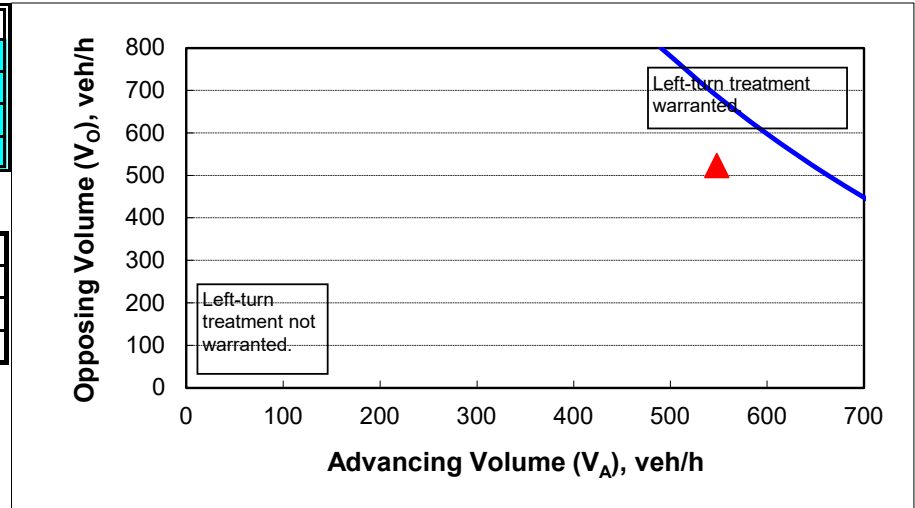
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 548 |
| Opposing volume (V_O), veh/h: | 523 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 647 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 7% |
| Advancing volume (V_A), veh/h: | 570 |
| Opposing volume (V_O), veh/h: | 600 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 332 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |

CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

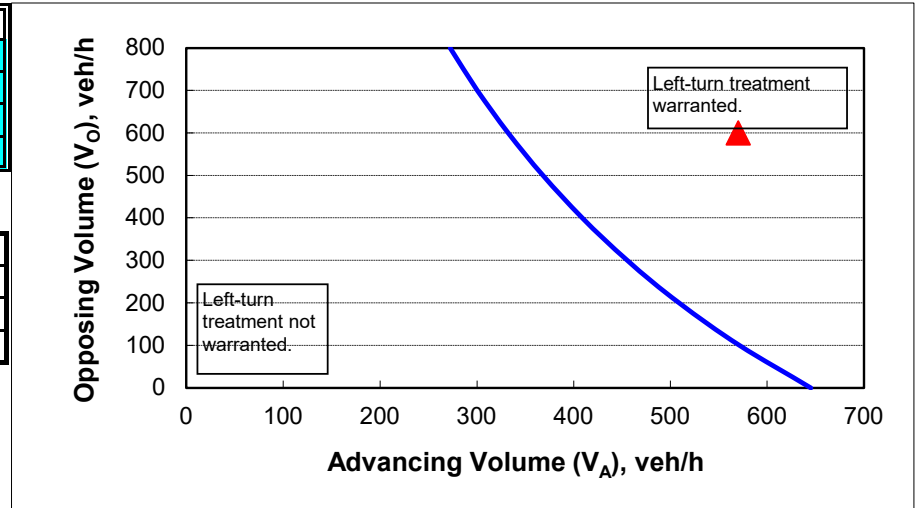


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1371 |
| Percentage of right-turns on minor road, %: | 55% |
| Minor-road volume (one direction), veh/h: | 99 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 138 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

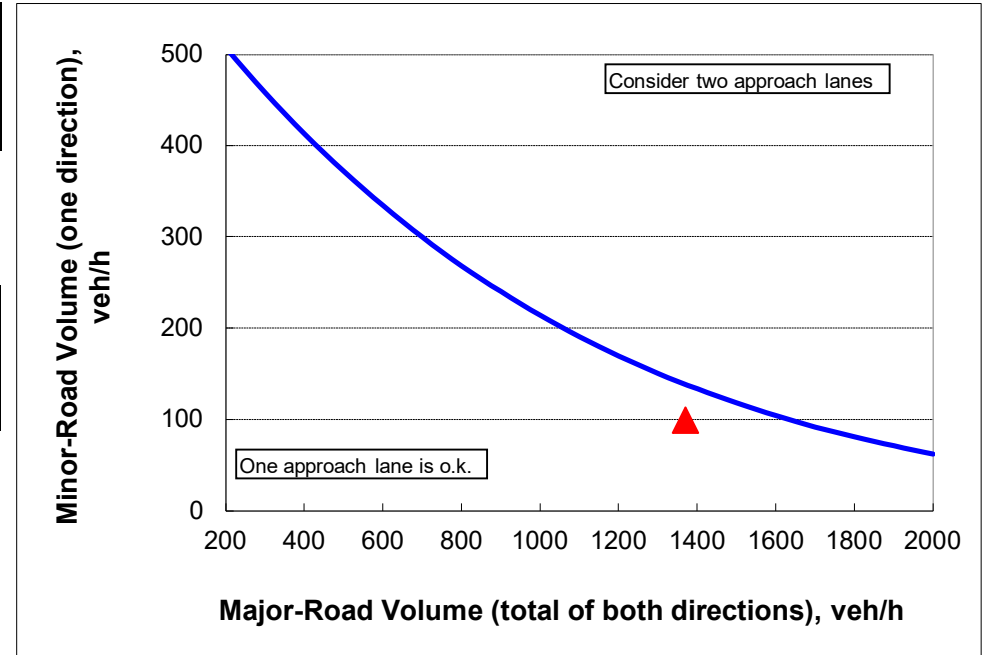


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1498 |
| Percentage of right-turns on minor road, %: | 60% |
| Minor-road volume (one direction), veh/h: | 92 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 127 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

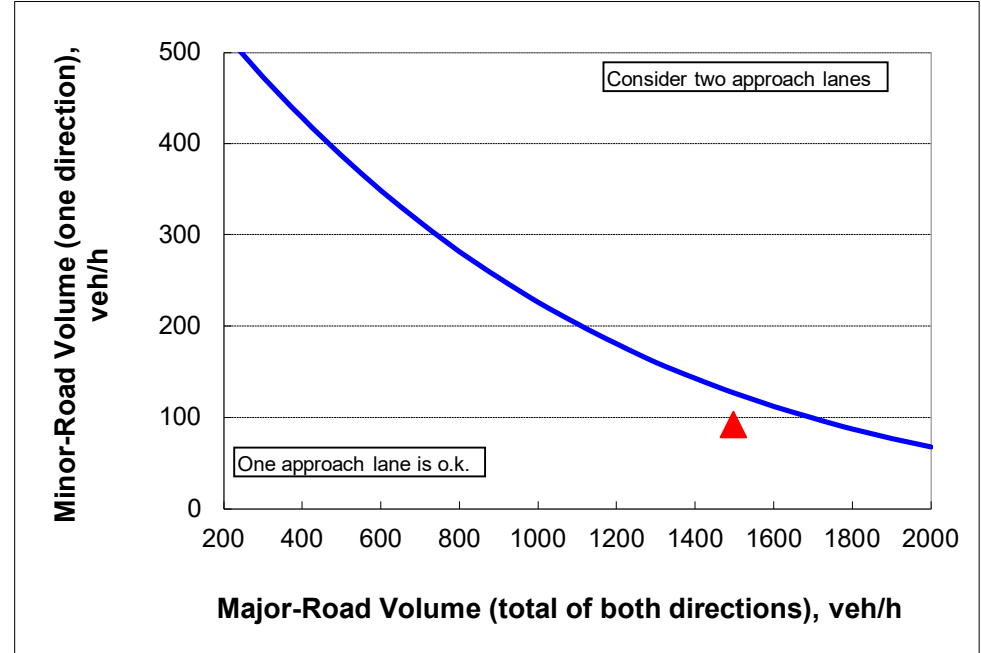


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1590 |
| Percentage of right-turns on minor road, %: | 55% |
| Minor-road volume (one direction), veh/h: | 115 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 106 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

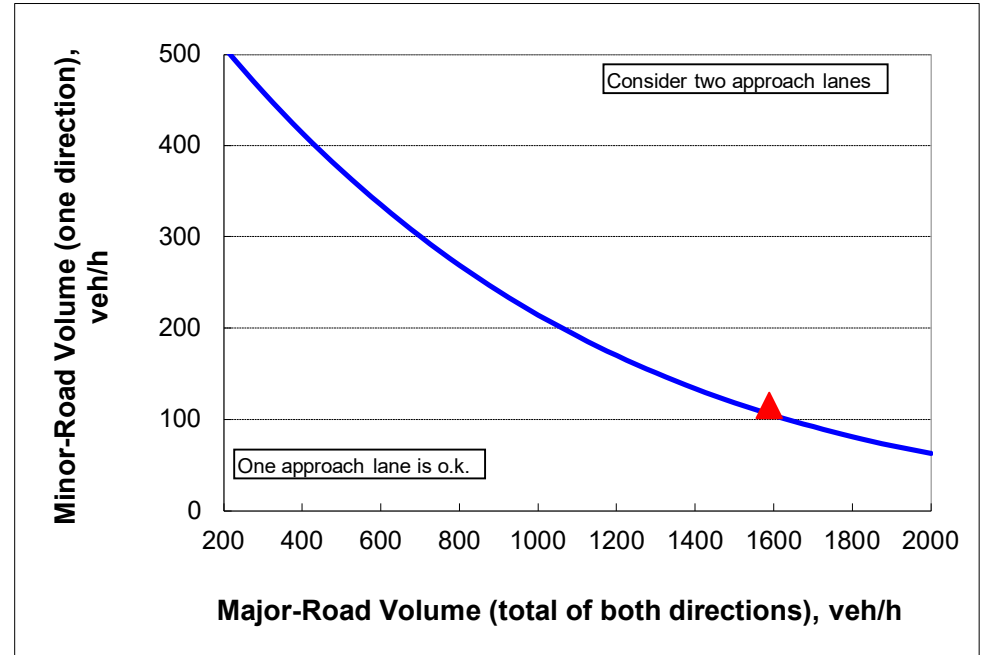


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1738 |
| Percentage of right-turns on minor road, %: | 60% |
| Minor-road volume (one direction), veh/h: | 107 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 95 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

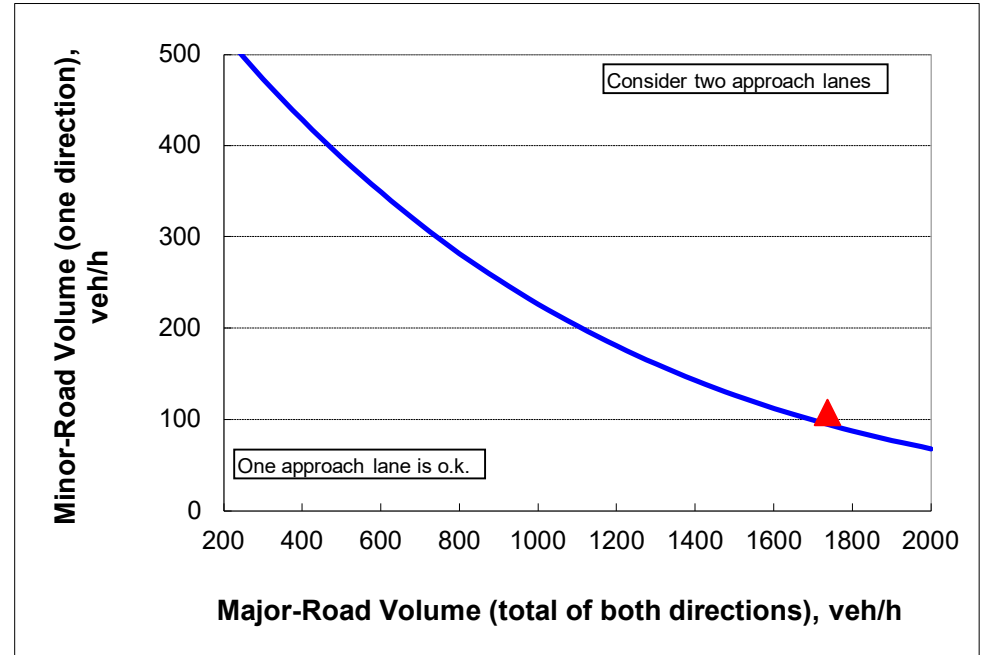


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

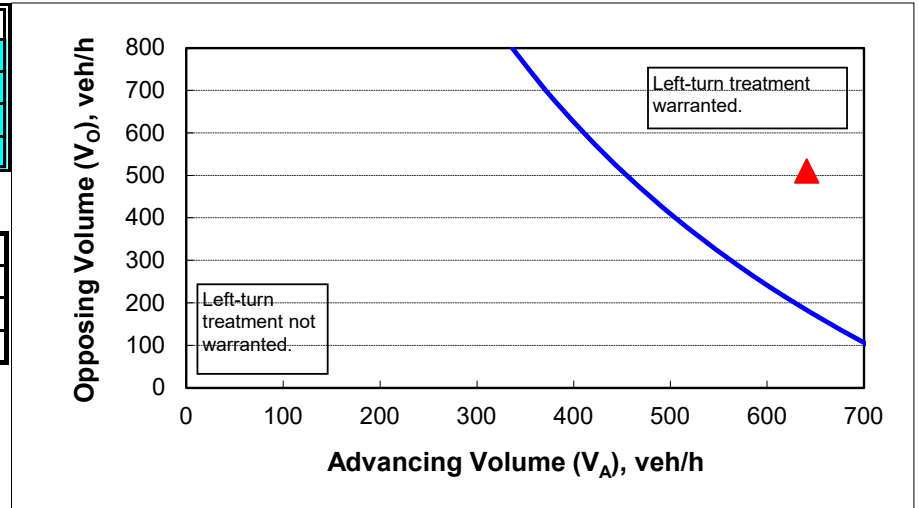
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 4% |
| Advancing volume (V_A), veh/h: | 641 |
| Opposing volume (V_O), veh/h: | 510 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 450 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

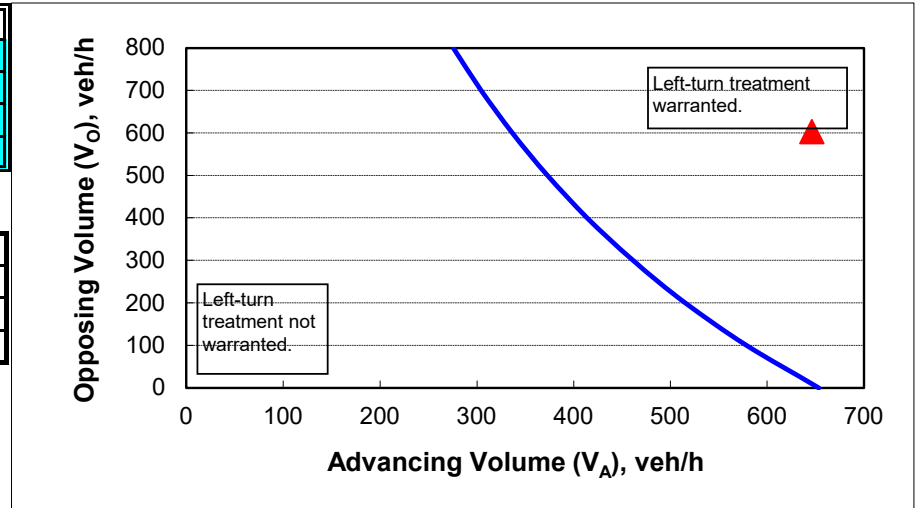
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 7% |
| Advancing volume (V_A), veh/h: | 646 |
| Opposing volume (V_O), veh/h: | 603 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 336 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

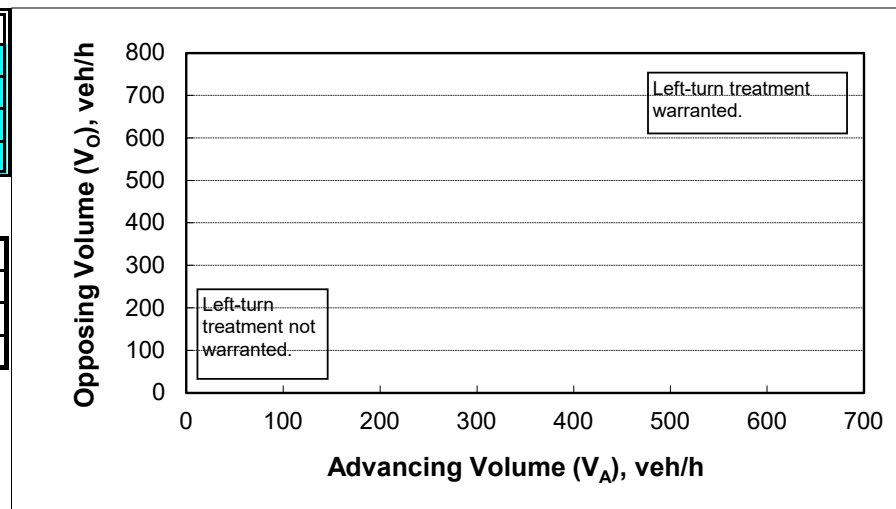
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 662 |
| Opposing volume (V_O), veh/h: | 817 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 781 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

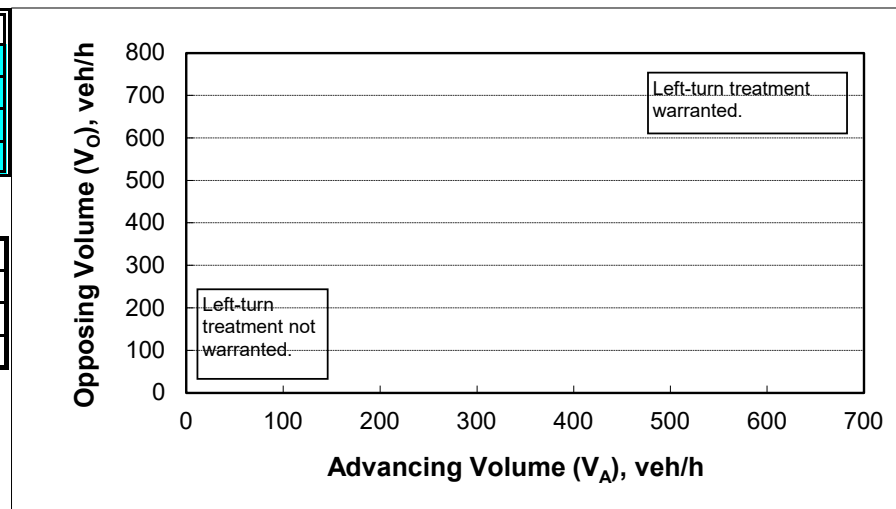
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 780 |
| Opposing volume (V_O), veh/h: | 824 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1085 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 768 |
| Opposing volume (V_O), veh/h: | 948 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 676 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |

CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

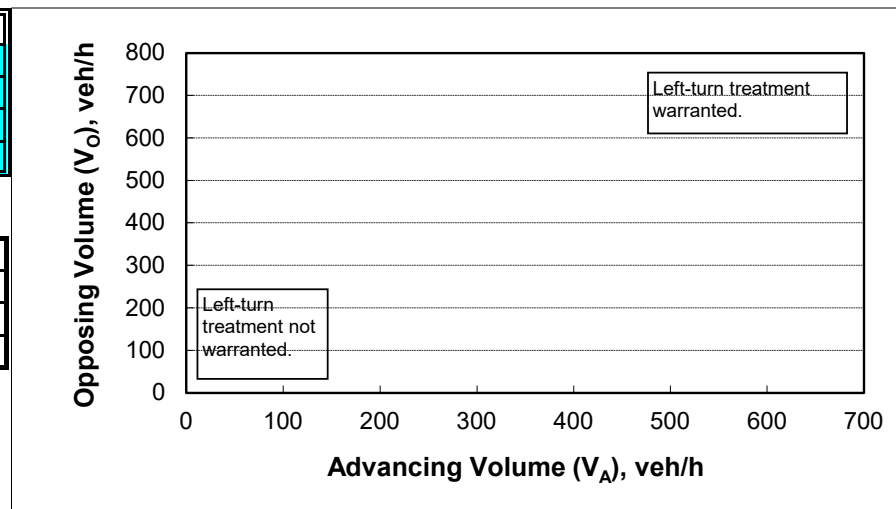


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

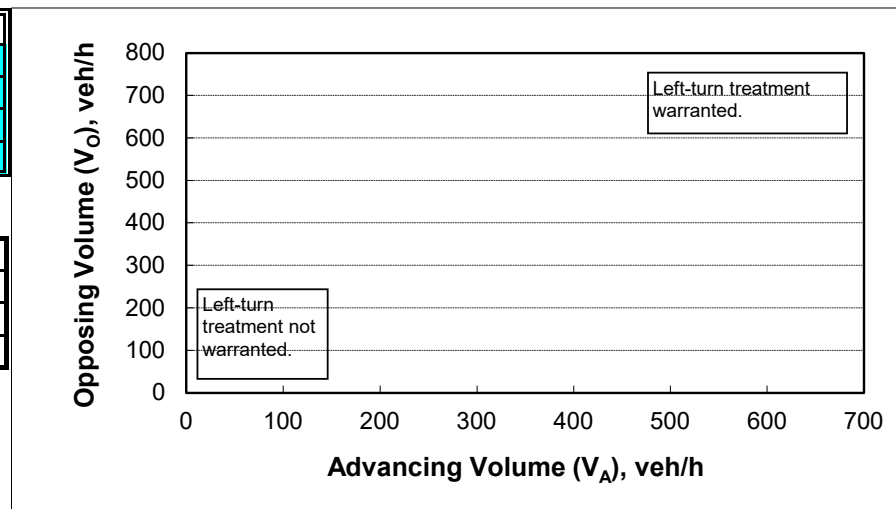
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 904 |
| Opposing volume (V_O), veh/h: | 956 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1027 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1721 |
| Percentage of right-turns on minor road, %: | 70% |
| Minor-road volume (one direction), veh/h: | 10 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 115 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

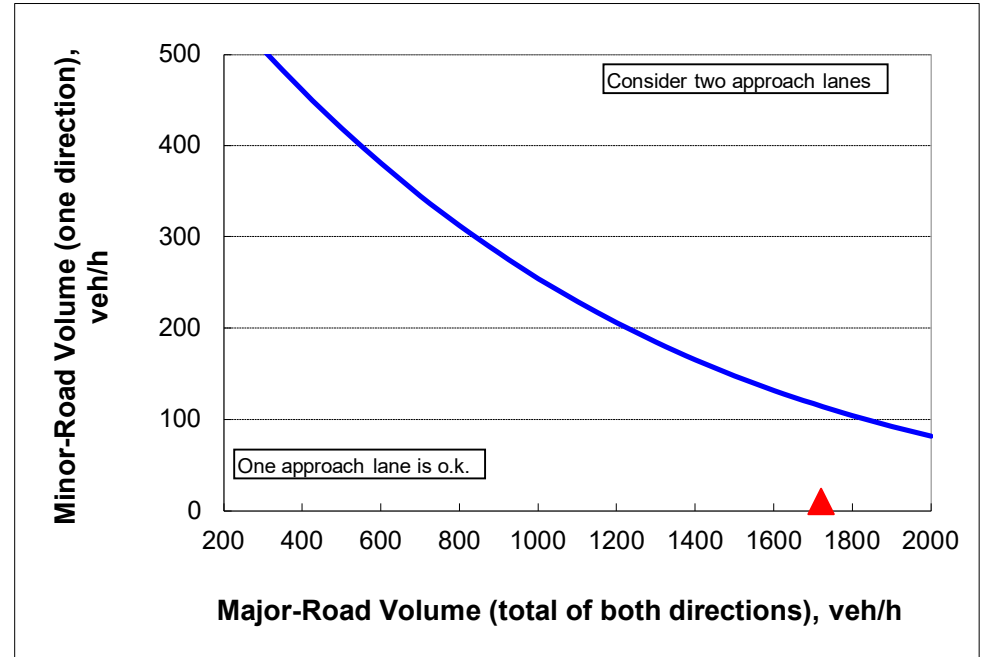


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1863 |
| Percentage of right-turns on minor road, %: | 100% |
| Minor-road volume (one direction), veh/h: | 7 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 228 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

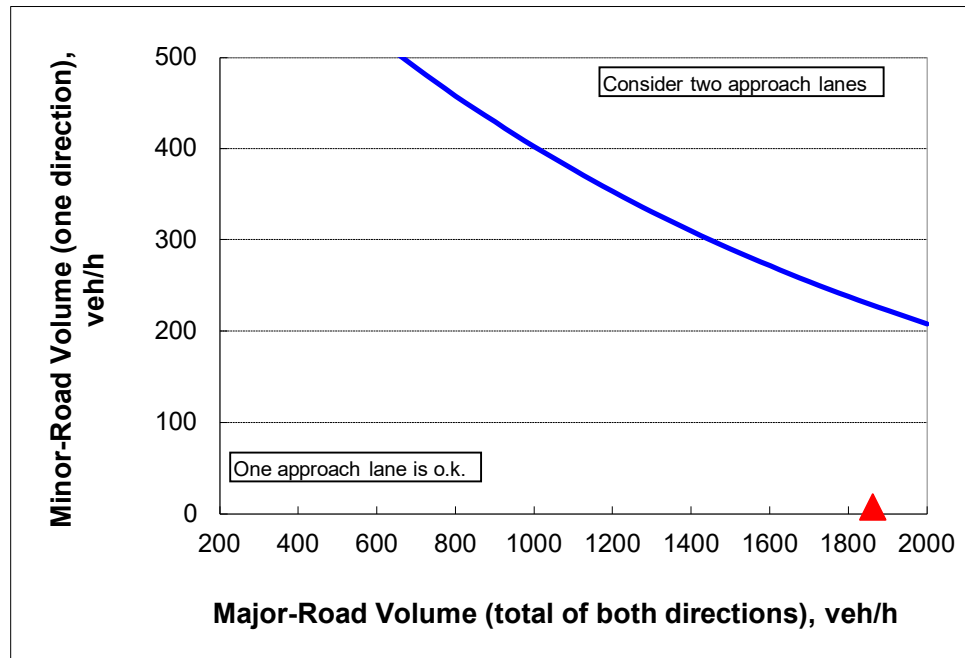


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1721 |
| Percentage of right-turns on minor road, %: | 95% |
| Minor-road volume (one direction), veh/h: | 131 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 212 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

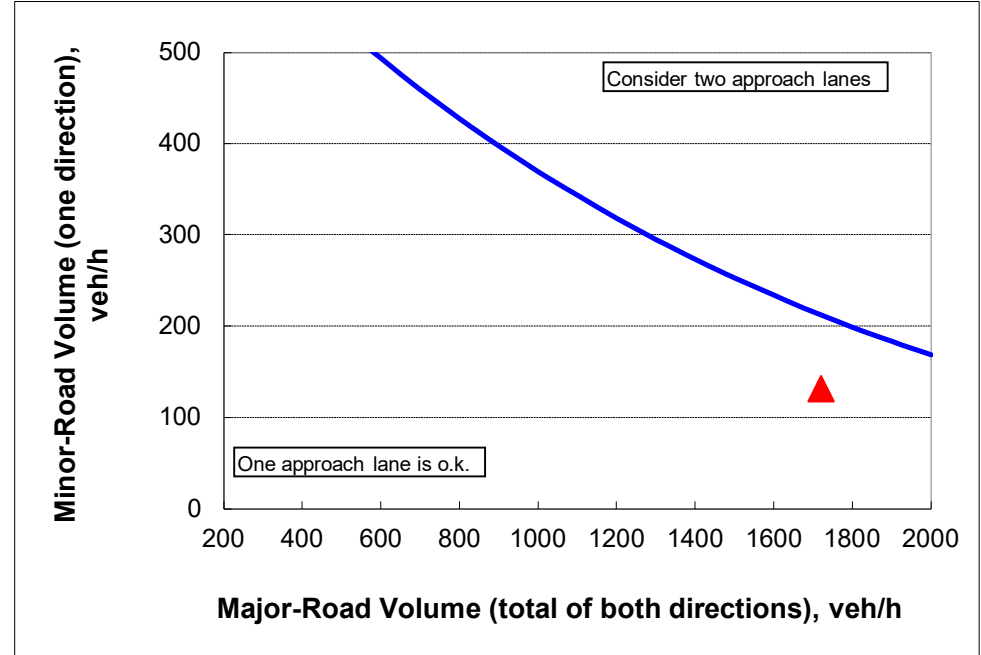


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1863 |
| Percentage of right-turns on minor road, %: | 99% |
| Minor-road volume (one direction), veh/h: | 72 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 215 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

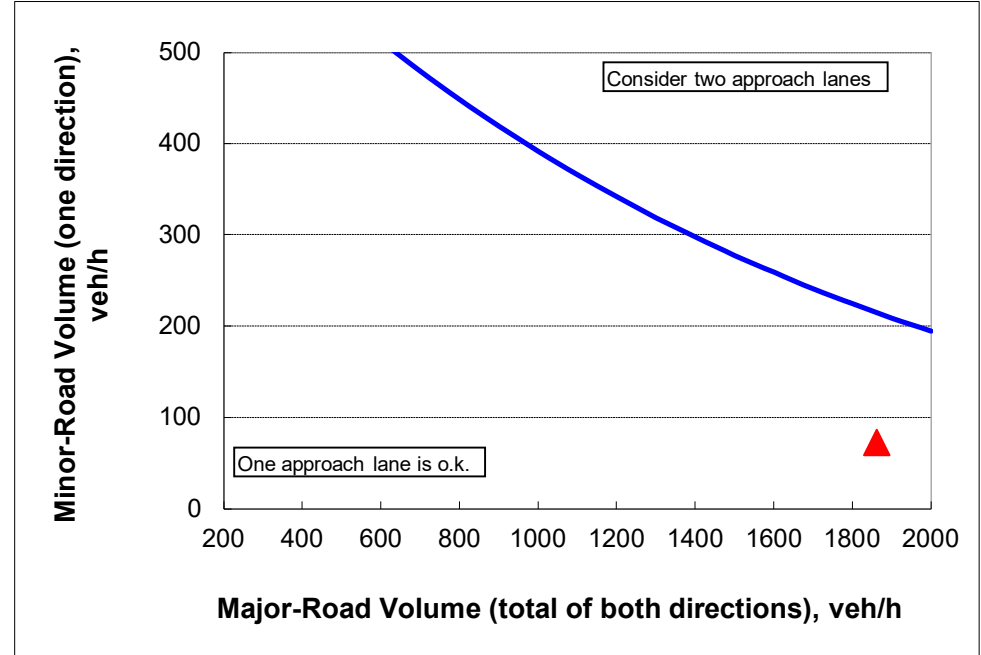


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 953 |
| Right-turn volume, veh/h: | 5 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 13 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

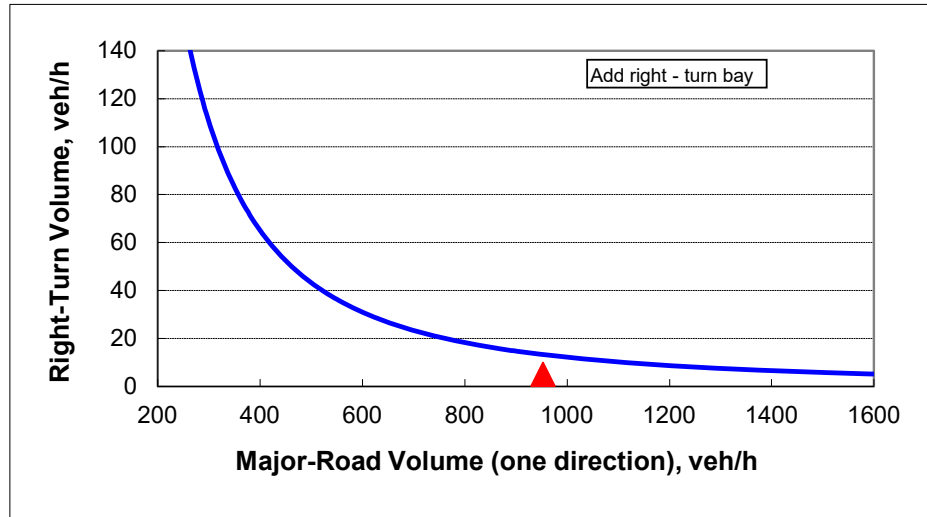


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 959 |
| Right-turn volume, veh/h: | 3 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 13 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

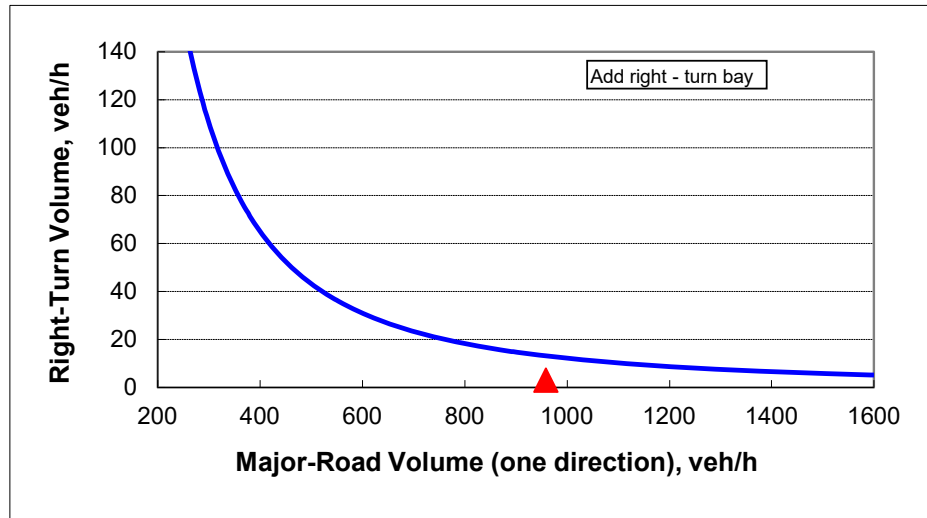


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 768 |
| Right-turn volume, veh/h: | 10 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 20 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

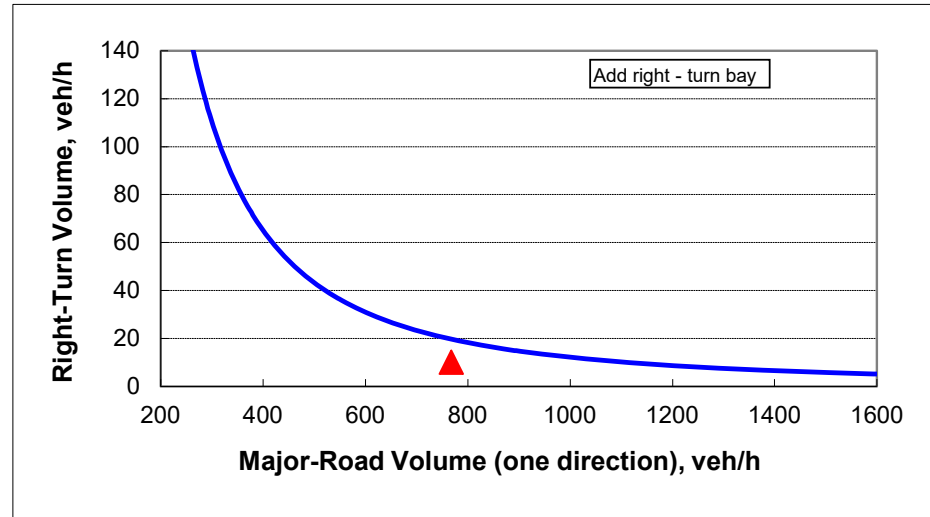


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 904 |
| Right-turn volume, veh/h: | 9 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 15 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

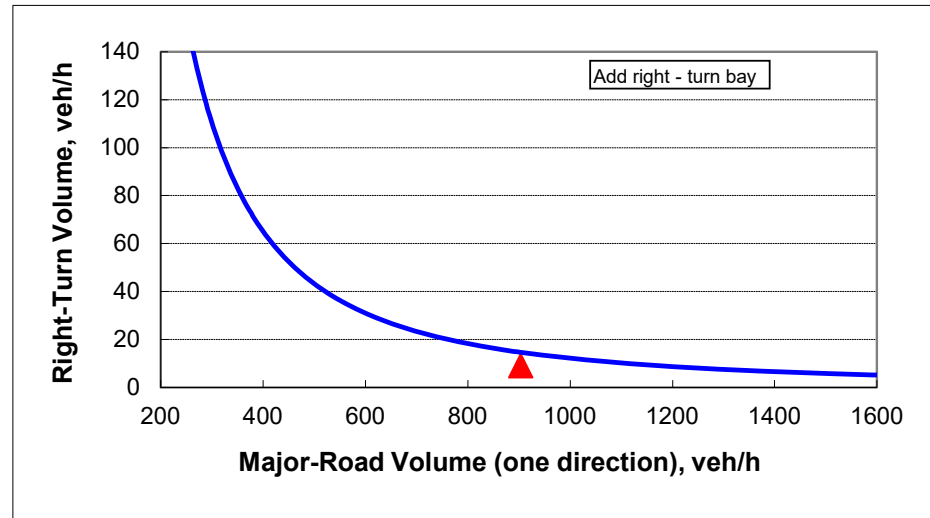


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

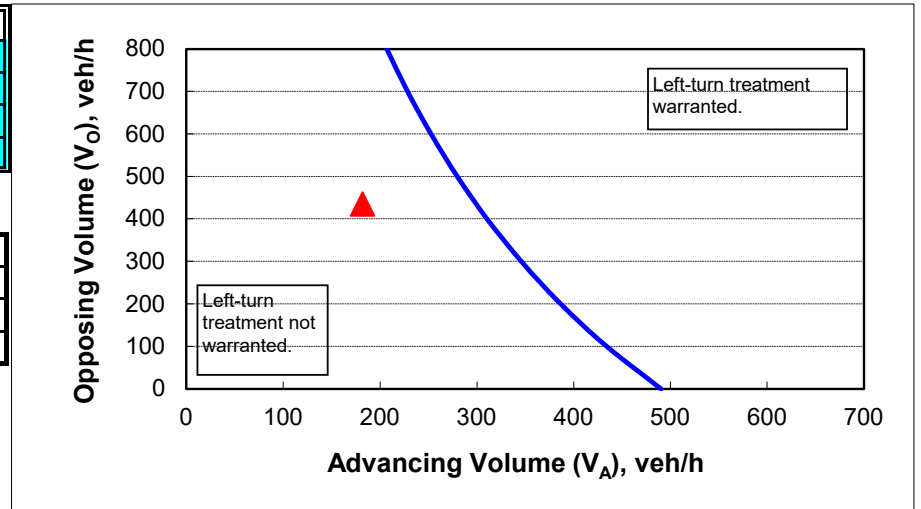
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 13% |
| Advancing volume (V_A), veh/h: | 182 |
| Opposing volume (V_O), veh/h: | 435 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 299 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

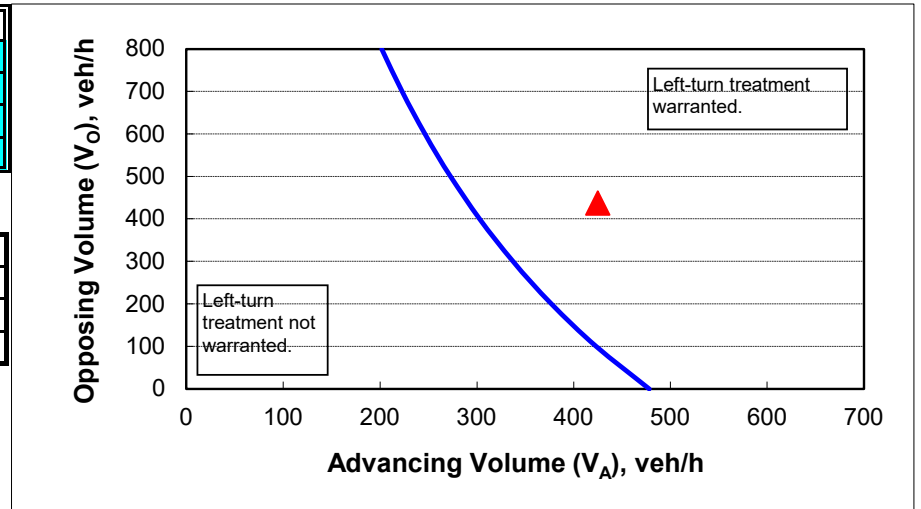
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 13% |
| Advancing volume (V_A), veh/h: | 425 |
| Opposing volume (V_O), veh/h: | 437 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 291 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 617 |
| Percentage of right-turns on minor road, %: | 46% |
| Minor-road volume (one direction), veh/h: | 189 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 307 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

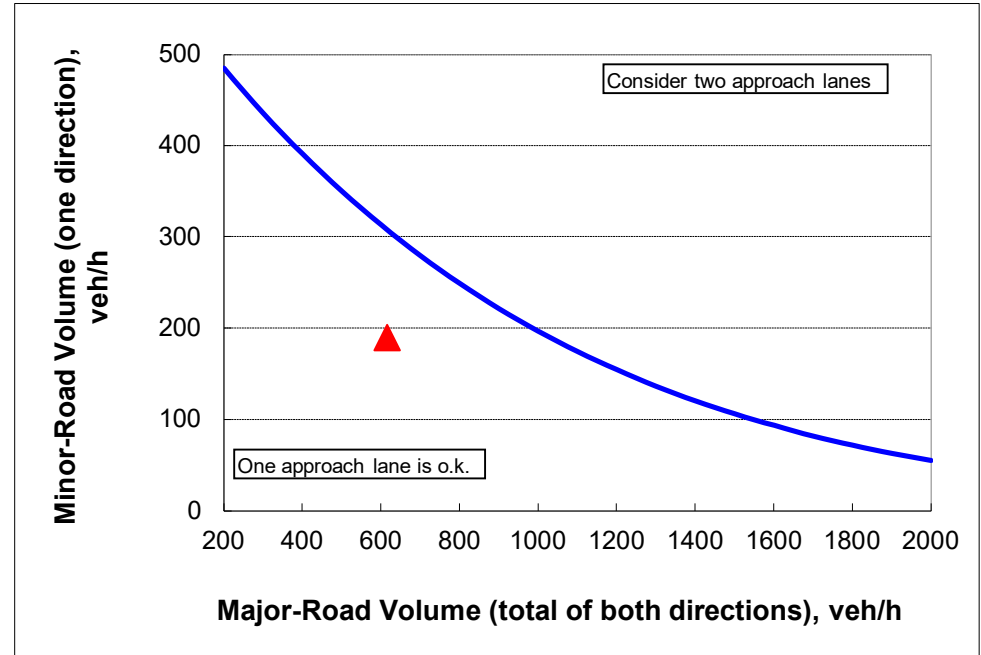


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 862 |
| Percentage of right-turns on minor road, %: | 38% |
| Minor-road volume (one direction), veh/h: | 134 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 217 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

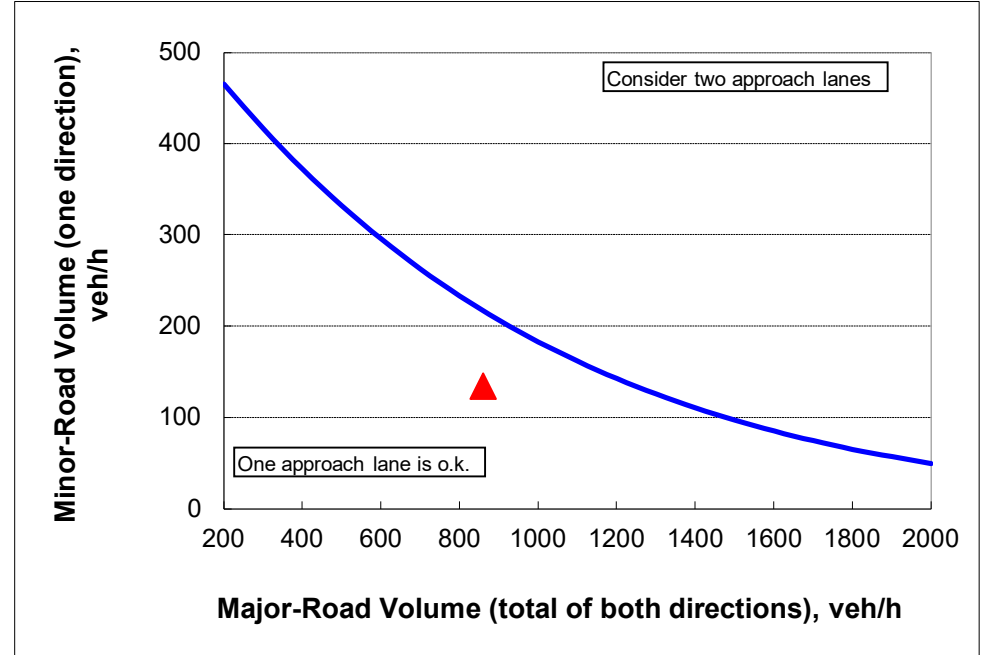


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 790 |
| Percentage of right-turns on minor road, %: | 46% |
| Minor-road volume (one direction), veh/h: | 242 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 252 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

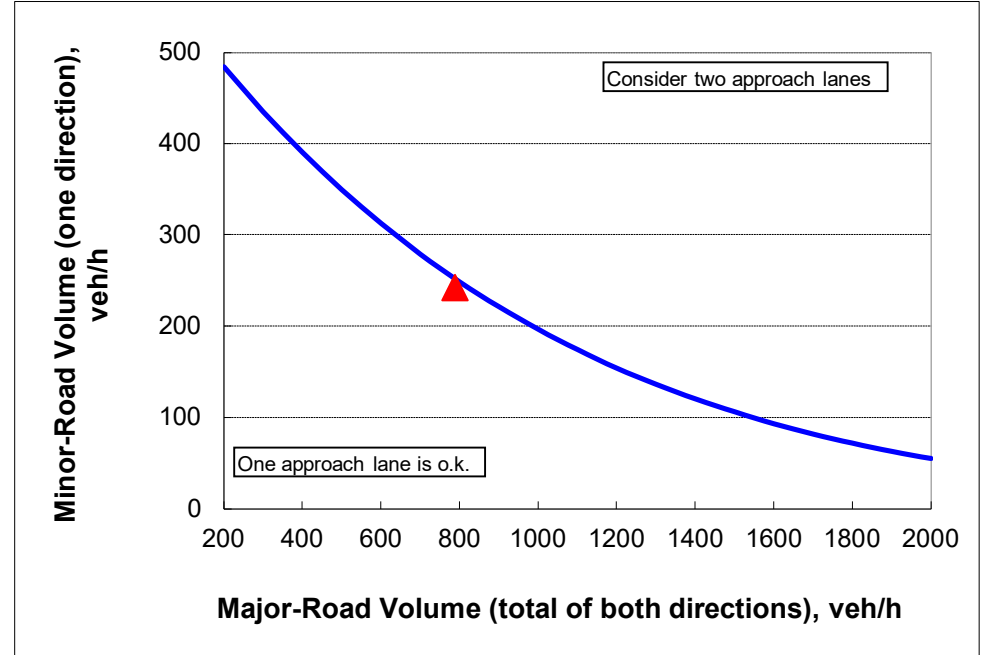


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1103 |
| Percentage of right-turns on minor road, %: | 38% |
| Minor-road volume (one direction), veh/h: | 171 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 161 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

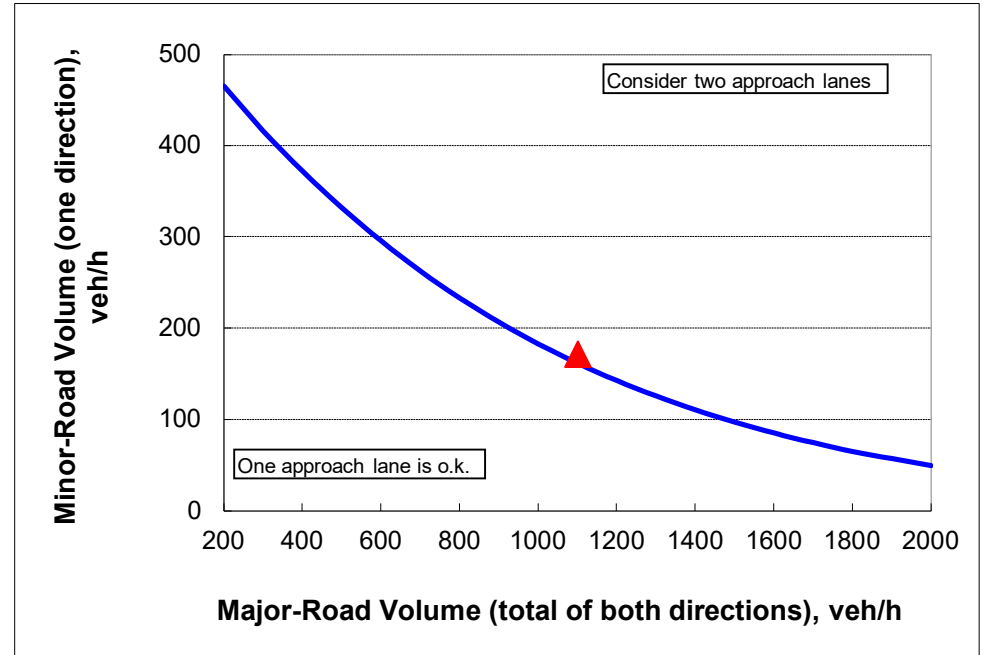


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 435 |
| Right-turn volume, veh/h: | 63 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 56 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

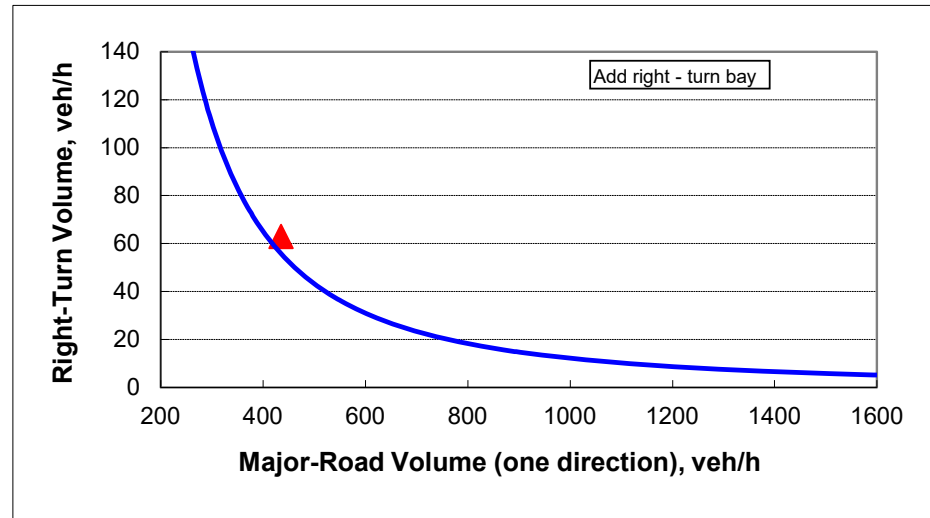


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| Roadway geometry: | 2-lane roadway |
|---|----------------|
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 437 |
| Right-turn volume, veh/h: | 91 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting right-turn volume, veh/h: | 55 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

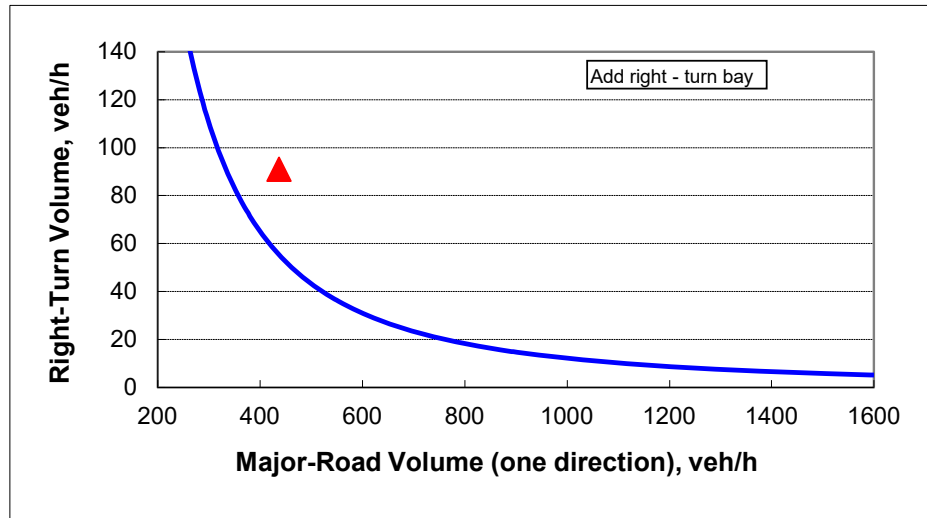


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

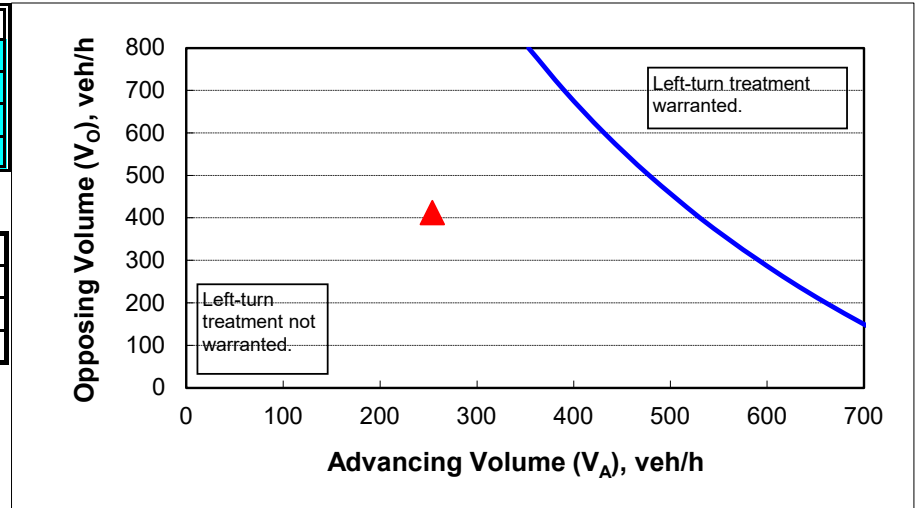
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 4% |
| Advancing volume (V_A), veh/h: | 254 |
| Opposing volume (V_O), veh/h: | 412 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 524 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

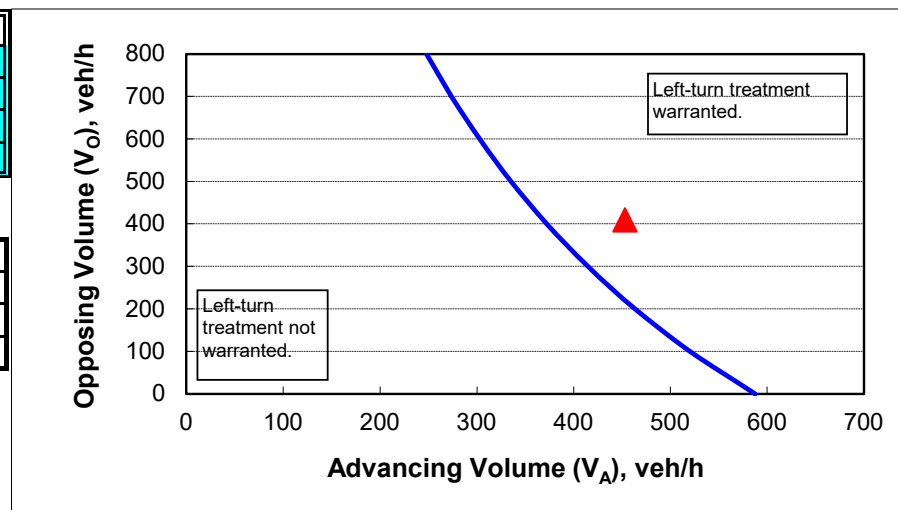
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 8% |
| Advancing volume (V_A), veh/h: | 453 |
| Opposing volume (V_O), veh/h: | 409 |

OUTPUT

| Variable | Value |
|--|---------------------------------------|
| Limiting advancing volume (V_A), veh/h: | 369 |
| Guidance for determining the need for a major-road left-turn bay: | |
| | Left-turn treatment warranted. |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 989 |
| Percentage of right-turns on minor road, %: | 98% |
| Minor-road volume (one direction), veh/h: | 58 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 392 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

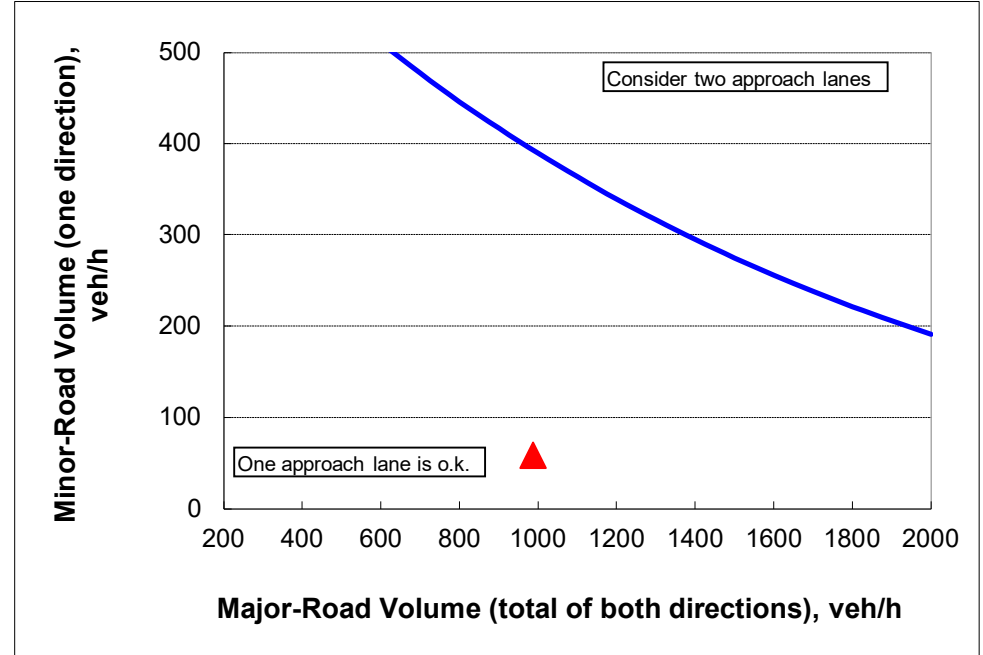


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1281 |
| Percentage of right-turns on minor road, %: | 93% |
| Minor-road volume (one direction), veh/h: | 45 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 286 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

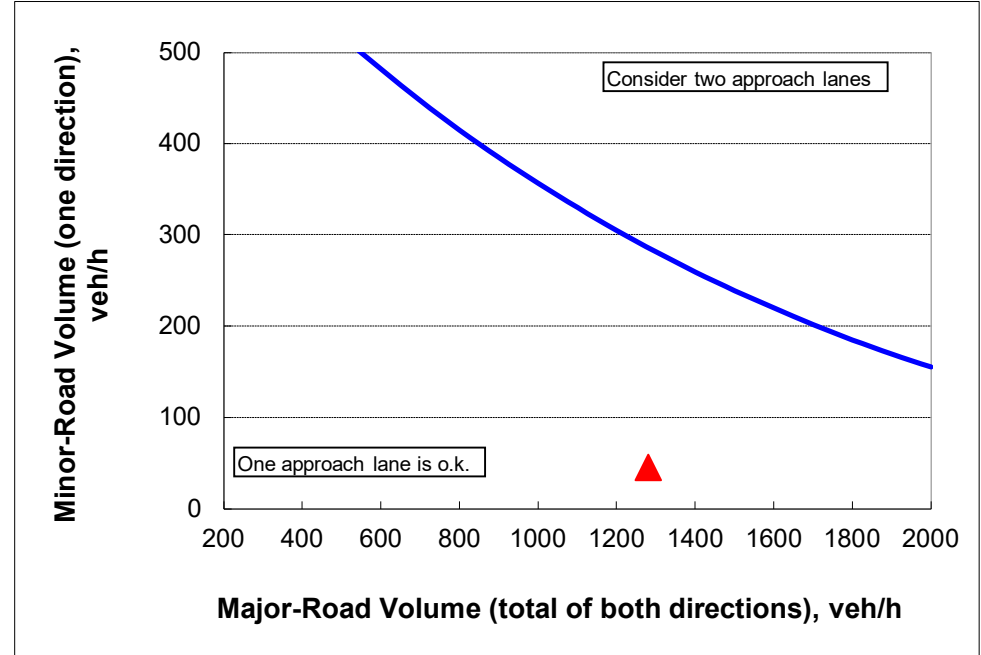


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 612 |
| Right-turn volume, veh/h: | 0 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 30 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

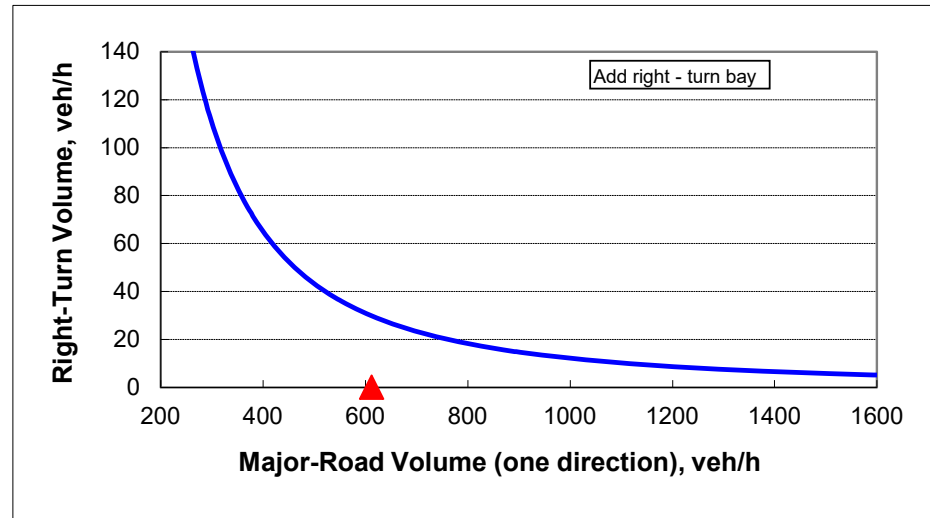


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 612 |
| Right-turn volume, veh/h: | 0 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 30 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

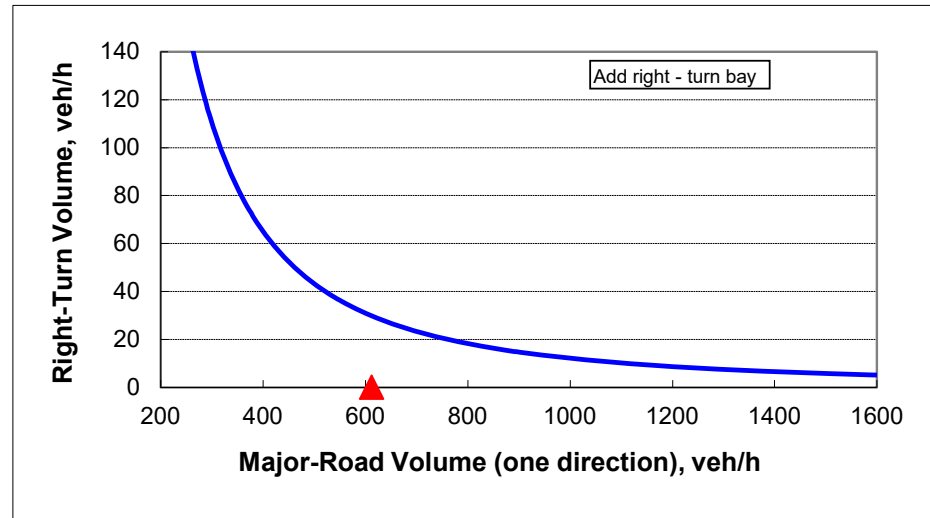


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

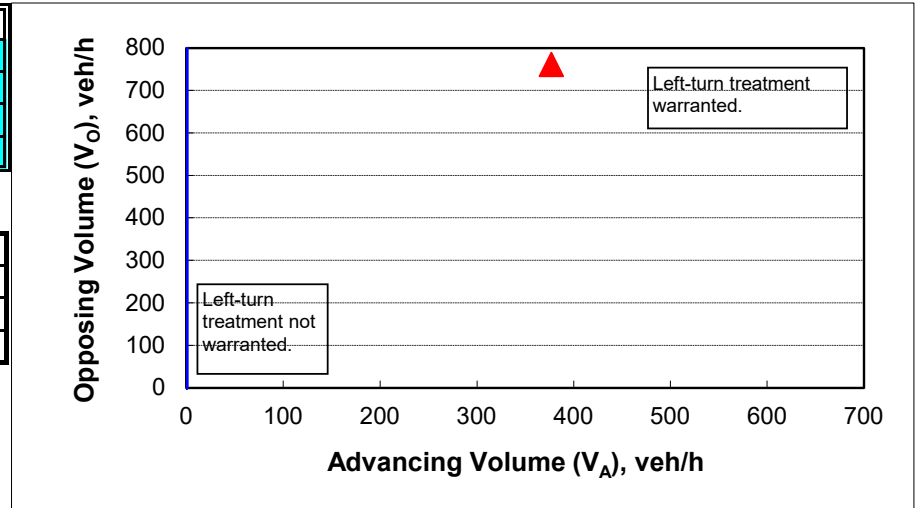
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 377 |
| Opposing volume (V_O), veh/h: | 761 |

OUTPUT

| Variable | Value |
|--|---------|
| Limiting advancing volume (V_A), veh/h: | #DIV/0! |
| Guidance for determining the need for a major-road left-turn bay: | |
| #DIV/0! | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

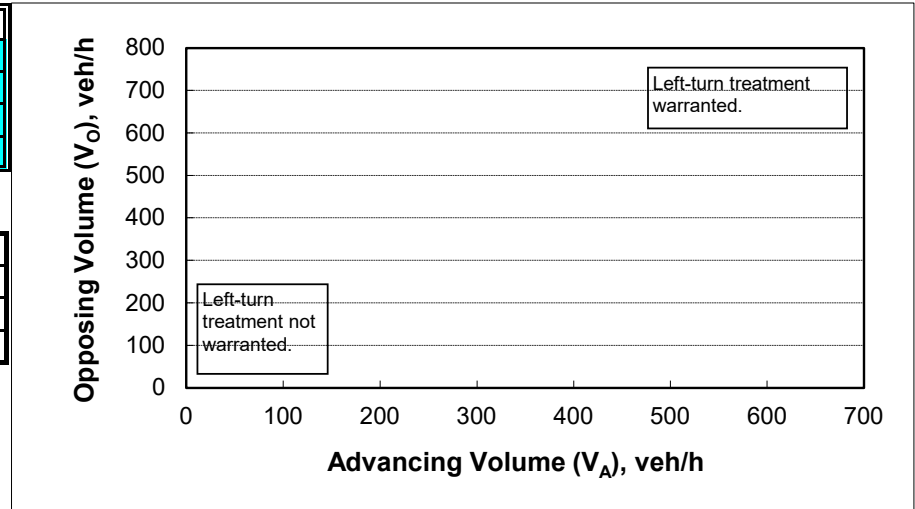
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 628 |
| Opposing volume (V_O), veh/h: | 888 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1582 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

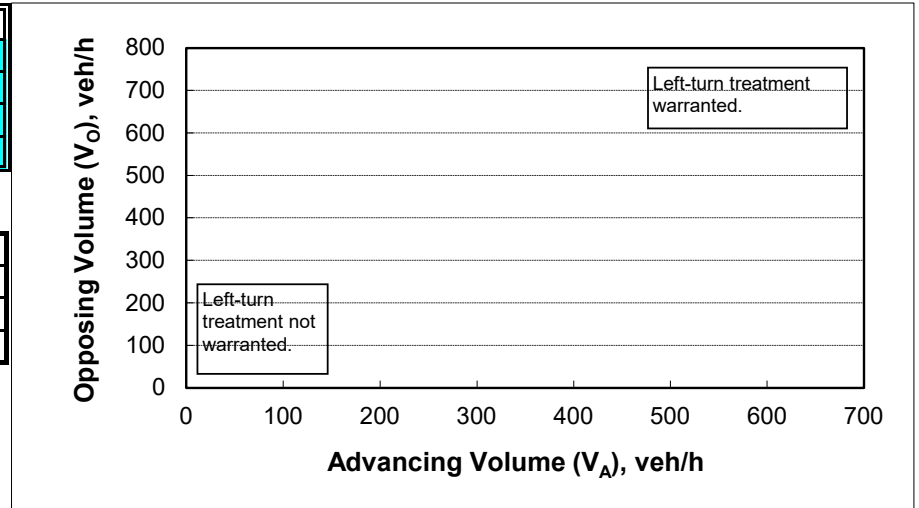
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 762 |
| Opposing volume (V_O), veh/h: | 377 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 2922 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

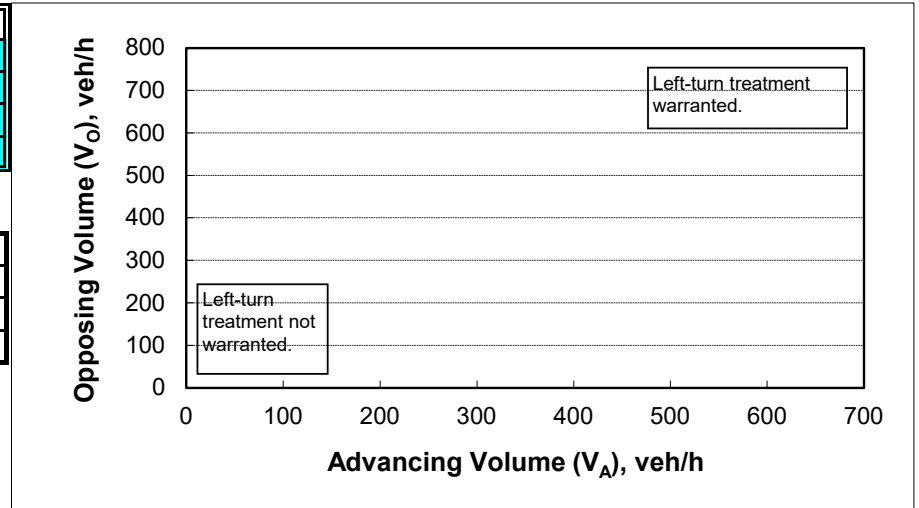
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 893 |
| Opposing volume (V_O), veh/h: | 627 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1095 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 767 |
| Percentage of right-turns on minor road, %: | 0% |
| Minor-road volume (one direction), veh/h: | 153 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 187 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

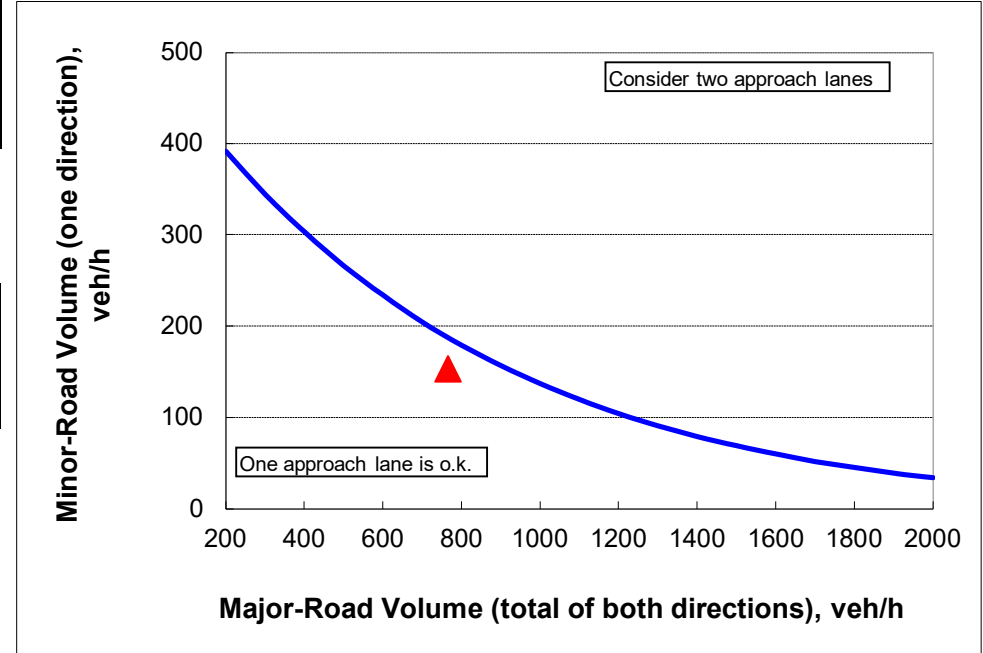


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1024 |
| Percentage of right-turns on minor road, %: | 2% |
| Minor-road volume (one direction), veh/h: | 131 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 134 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

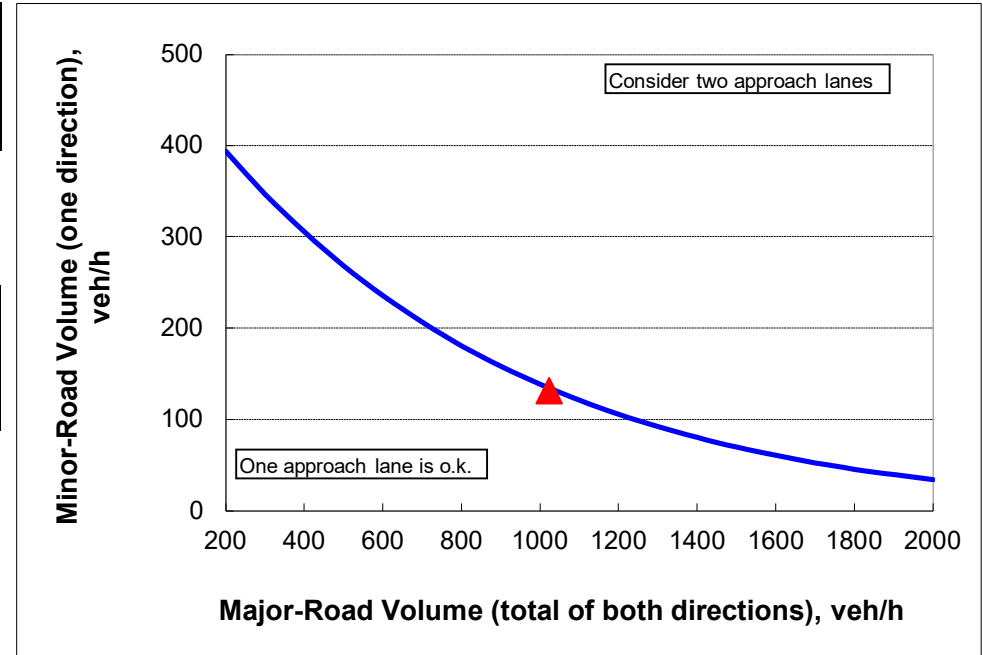


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 982 |
| Percentage of right-turns on minor road, %: | 0% |
| Minor-road volume (one direction), veh/h: | 196 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 141 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

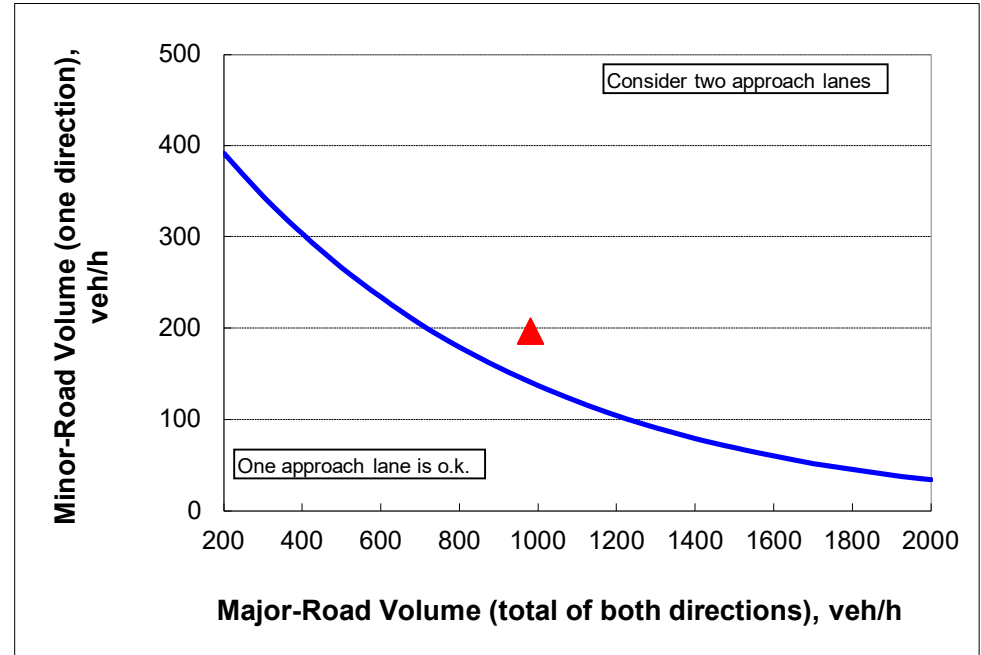


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1311 |
| Percentage of right-turns on minor road, %: | 2% |
| Minor-road volume (one direction), veh/h: | 168 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 91 |
| Guidance for determining minor-road approach geometry: | |
| Consider TWO approach lanes | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

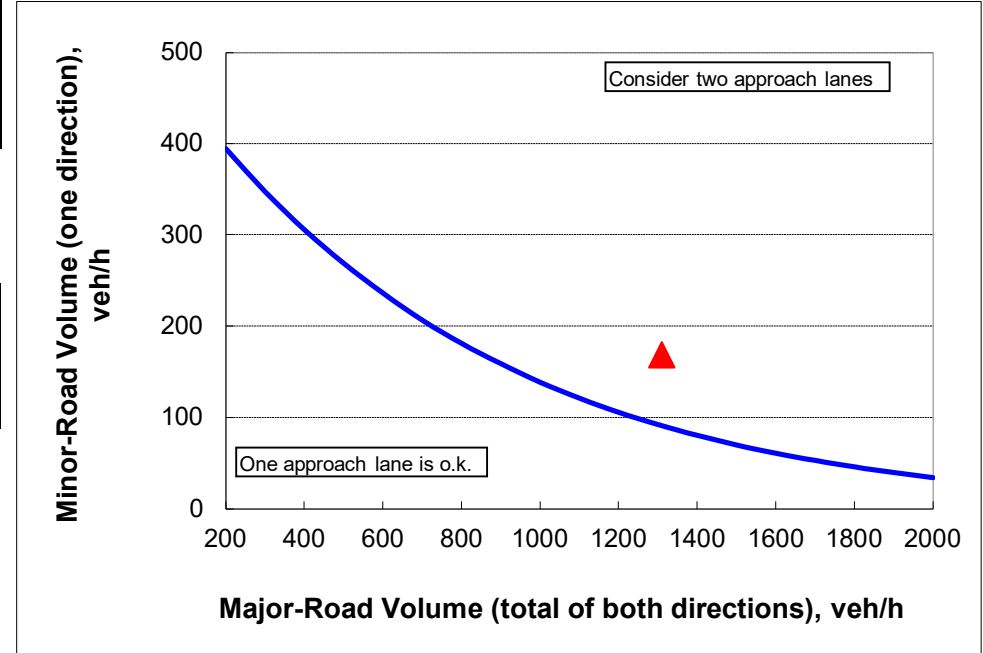


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1139 |
| Percentage of right-turns on minor road, %: | 100% |
| Minor-road volume (one direction), veh/h: | 5 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 368 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

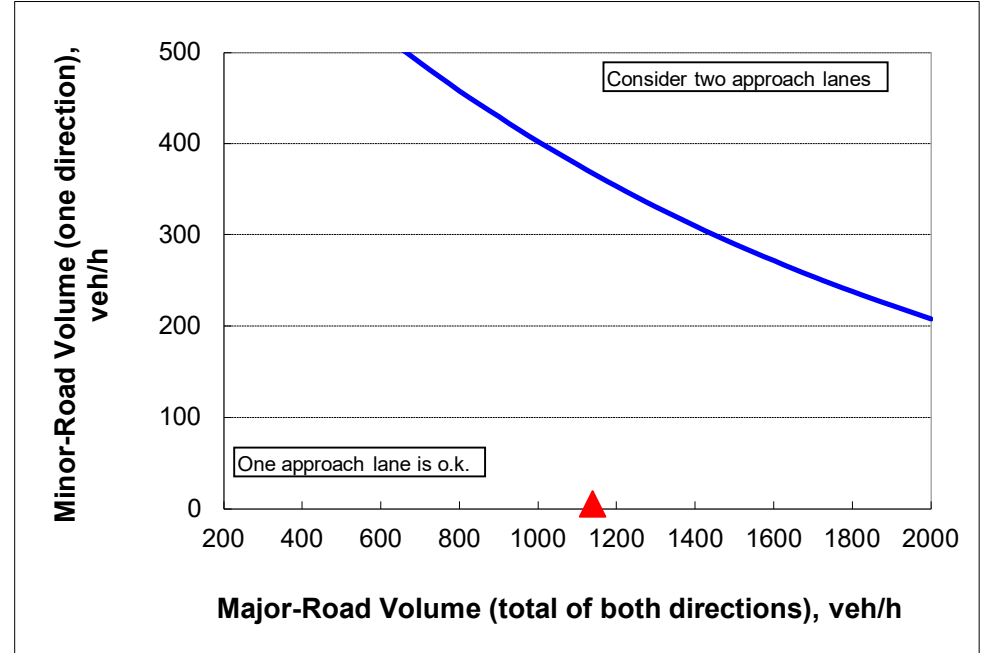


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1521 |
| Percentage of right-turns on minor road, %: | 52% |
| Minor-road volume (one direction), veh/h: | 23 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 112 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

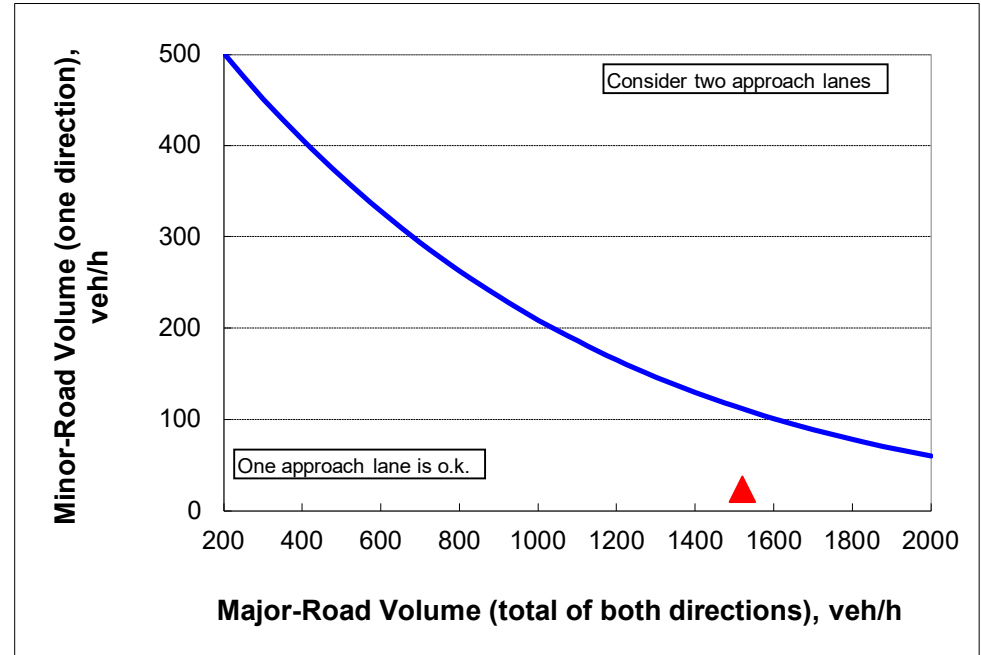


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 377 |
| Right-turn volume, veh/h: | 6 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 72 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

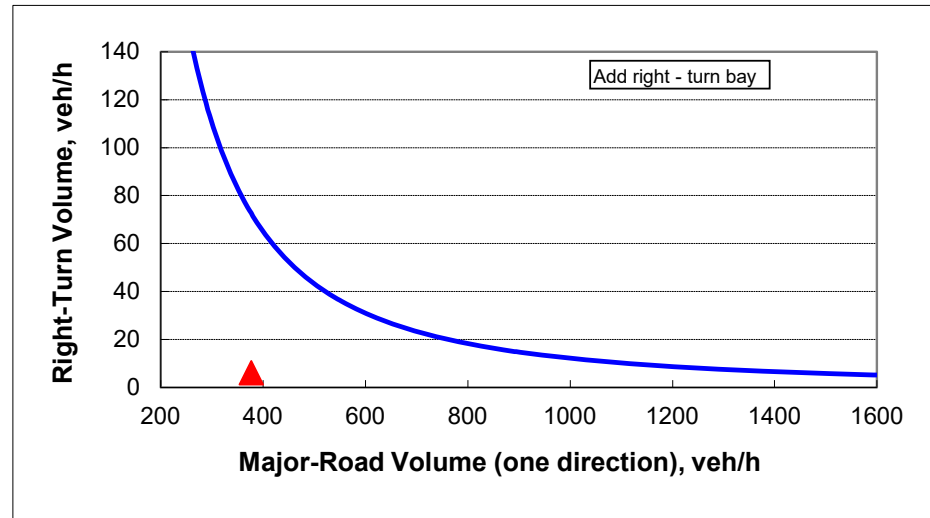


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 628 |
| Right-turn volume, veh/h: | 3 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 28 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

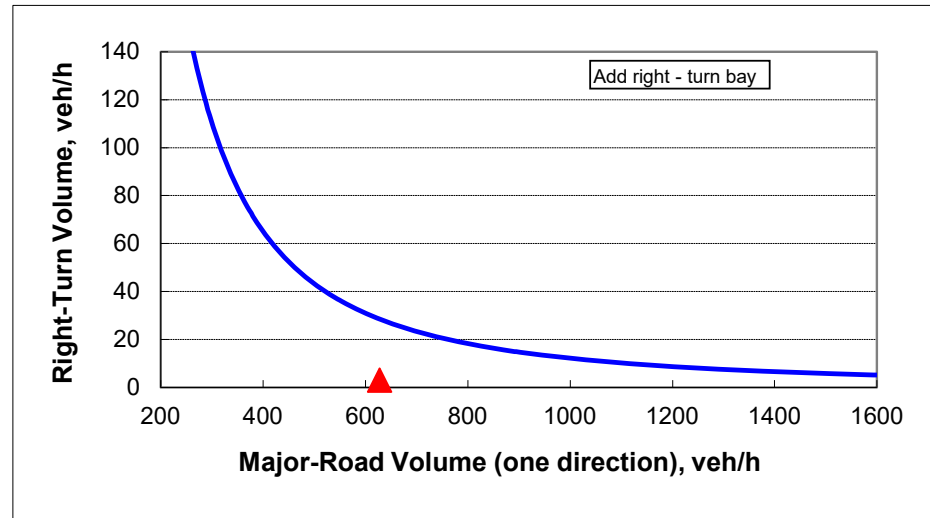


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| Roadway geometry: | 2-lane roadway |
|---|----------------|
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 513 |
| Right-turn volume, veh/h: | 109 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting right-turn volume, veh/h: | 41 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

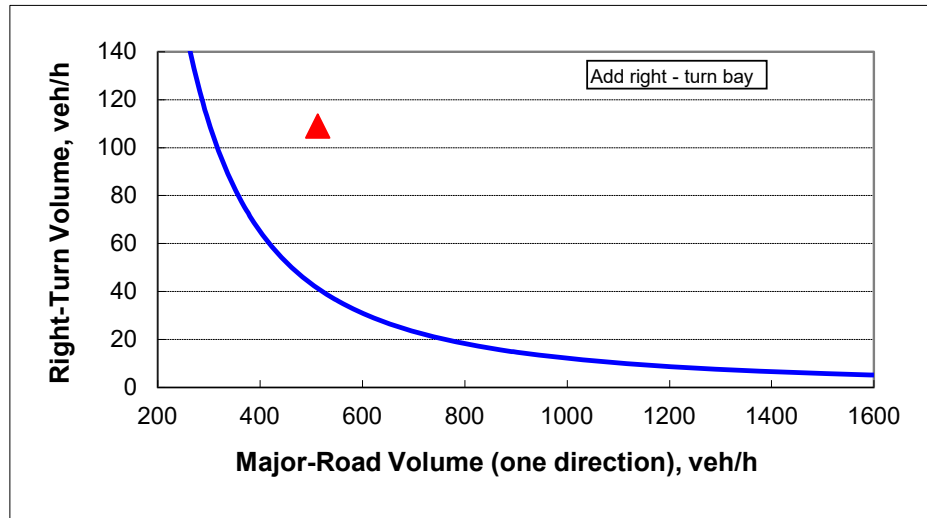


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 601 |
| Right-turn volume, veh/h: | 194 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 31 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

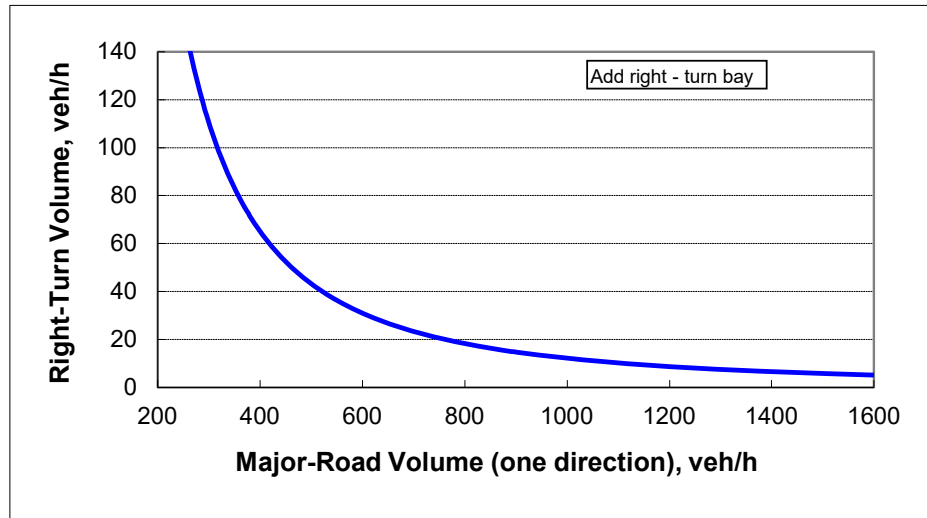


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

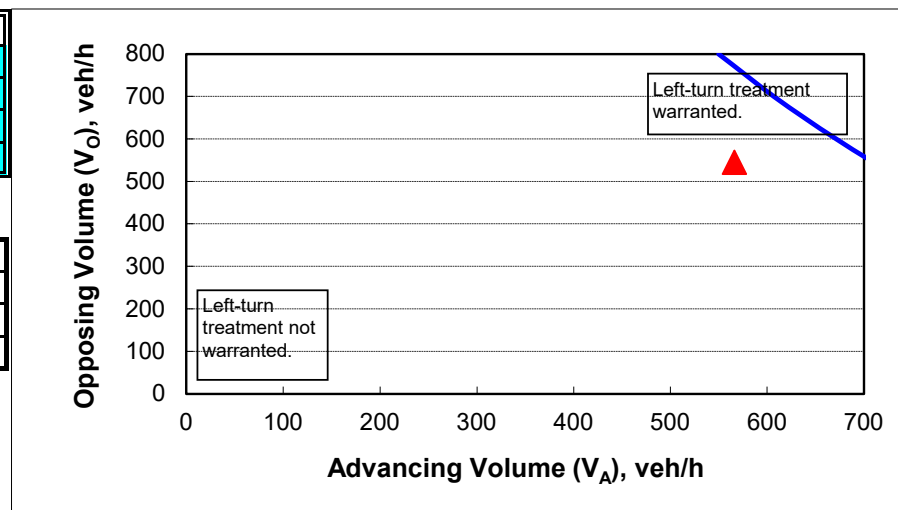
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 566 |
| Opposing volume (V_O), veh/h: | 545 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 710 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

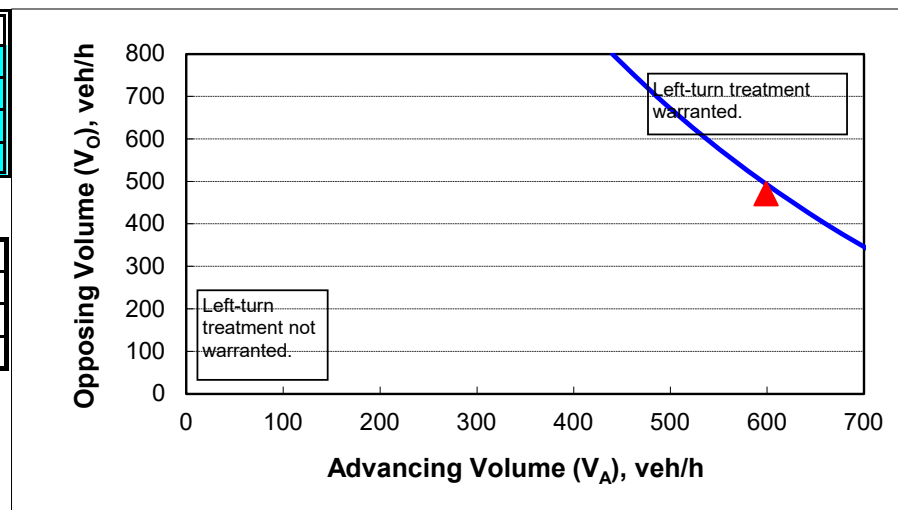
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 599 |
| Opposing volume (V_O), veh/h: | 471 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 613 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

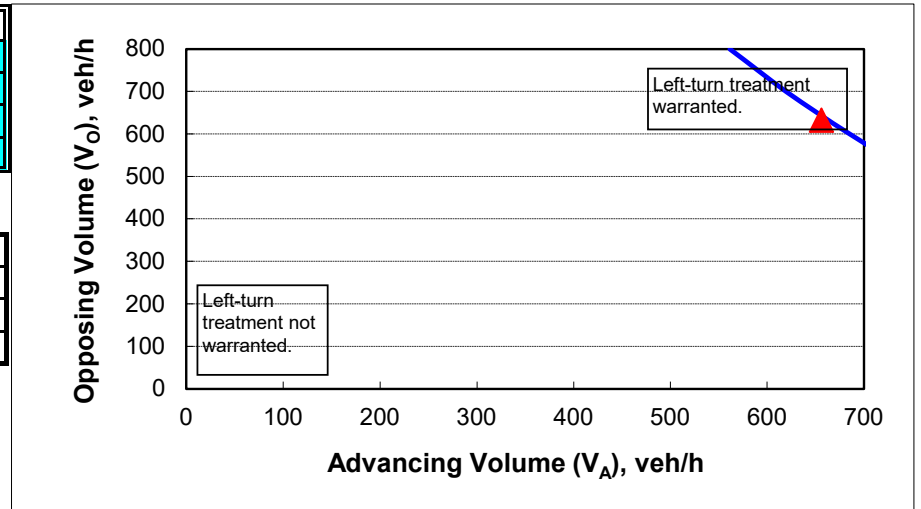
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 656 |
| Opposing volume (V_O), veh/h: | 632 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 663 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

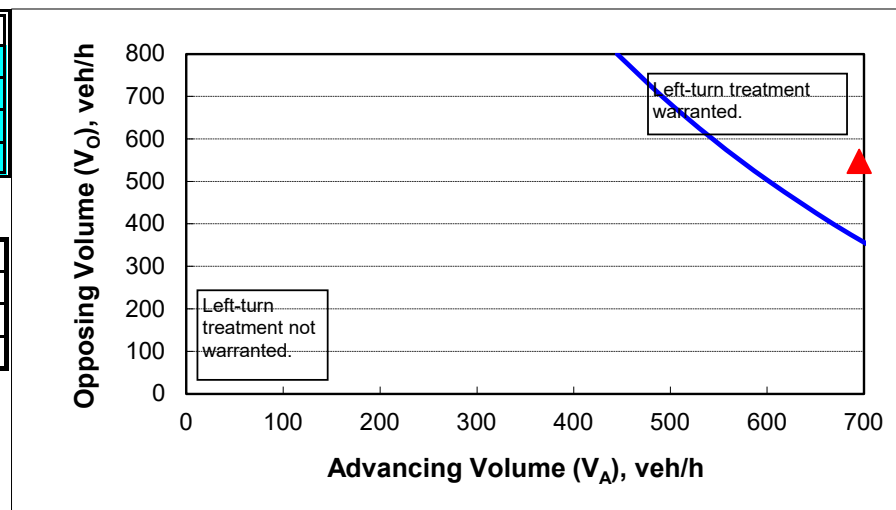
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 695 |
| Opposing volume (V_O), veh/h: | 547 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 574 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1288 |
| Percentage of right-turns on minor road, %: | 65% |
| Minor-road volume (one direction), veh/h: | 26 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 176 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

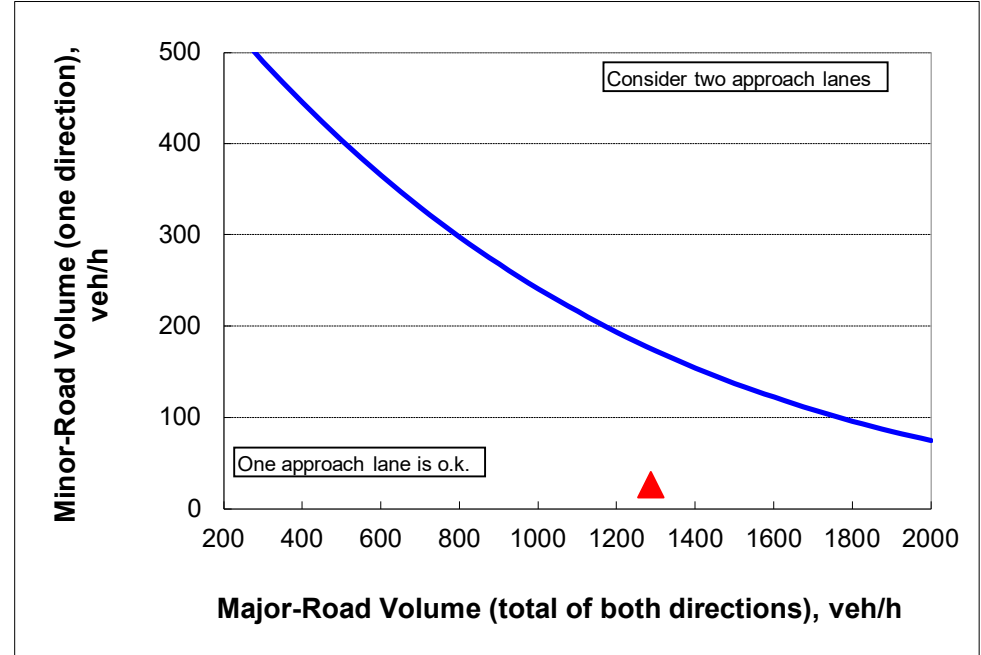


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1242 |
| Percentage of right-turns on minor road, %: | 68% |
| Minor-road volume (one direction), veh/h: | 22 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 192 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

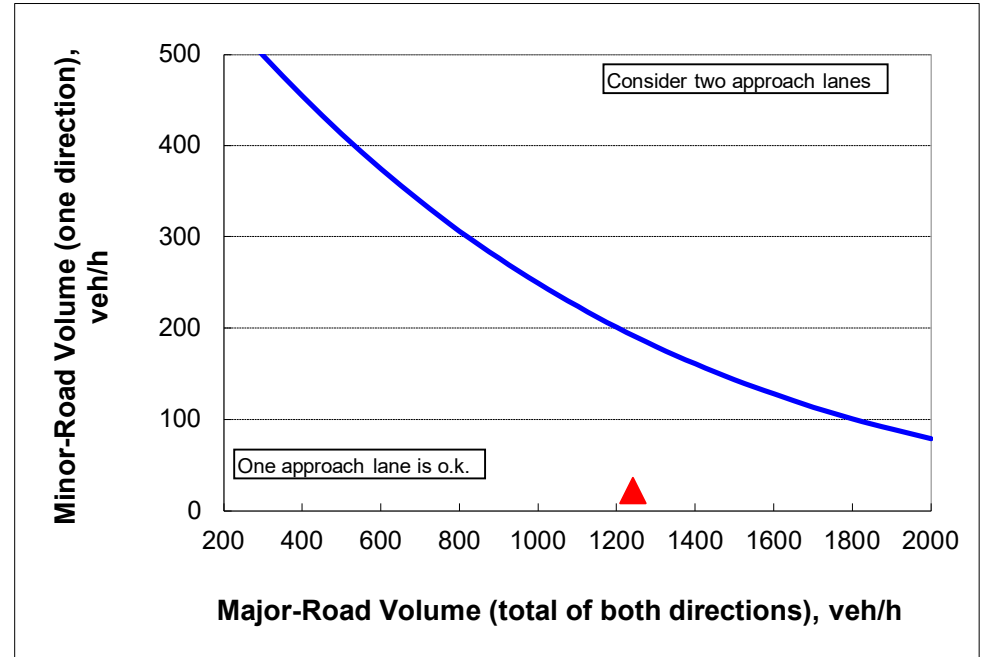


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| Roadway geometry: | 2-lane roadway |
|---|----------------|
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 632 |
| Right-turn volume, veh/h: | 1 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting right-turn volume, veh/h: | 28 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

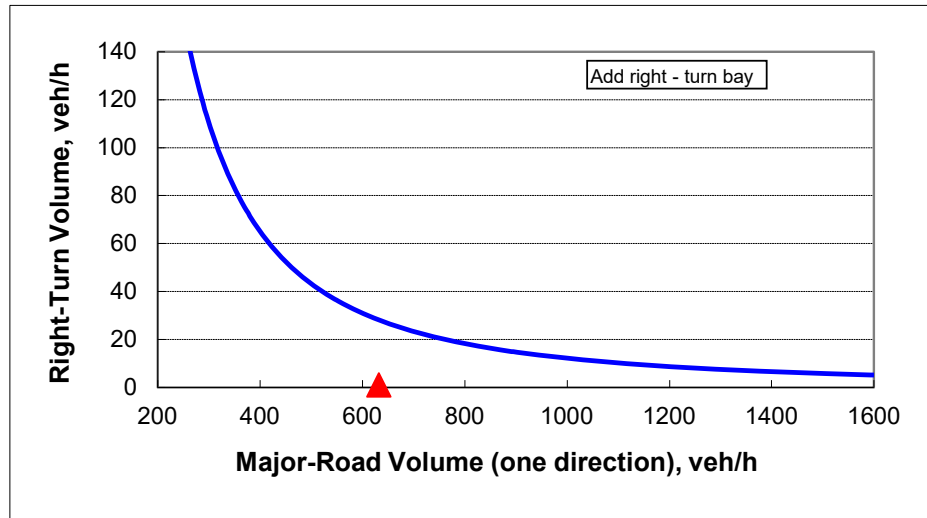


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 547 |
| Right-turn volume, veh/h: | 6 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 37 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

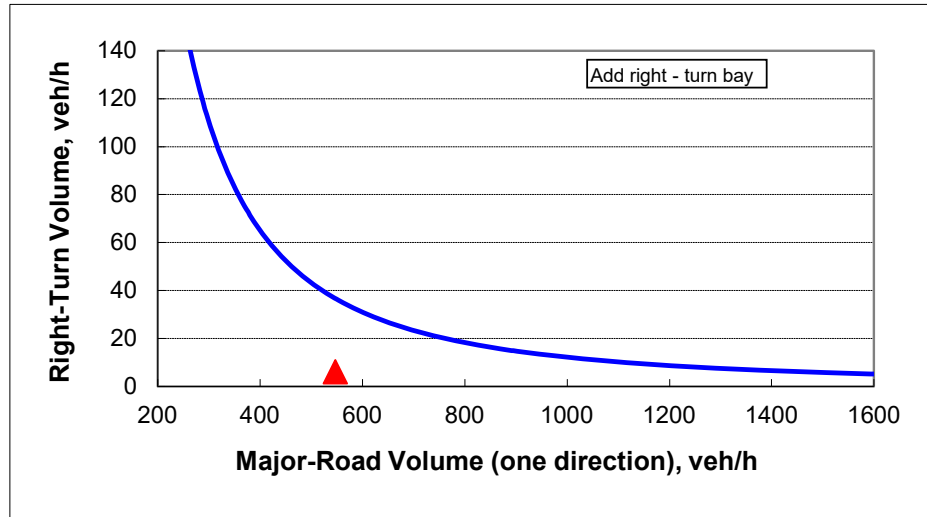


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

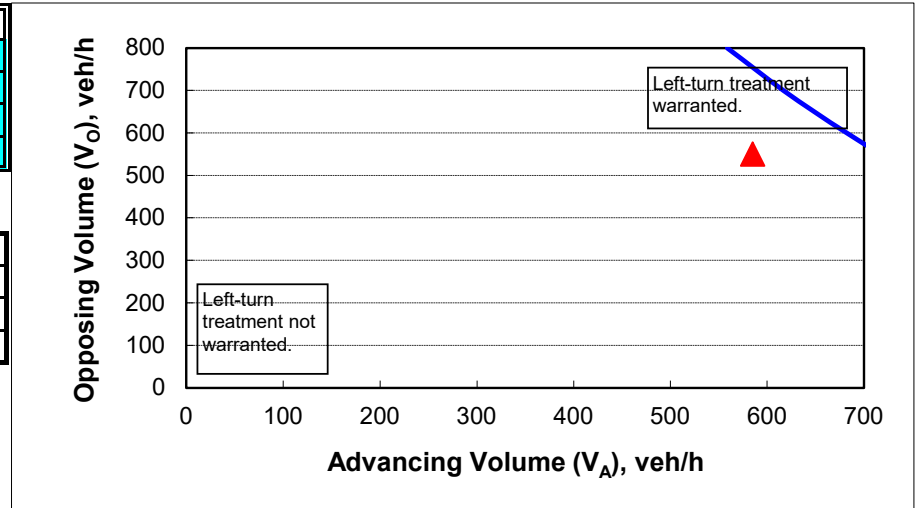
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 2% |
| Advancing volume (V_A), veh/h: | 585 |
| Opposing volume (V_O), veh/h: | 550 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 718 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

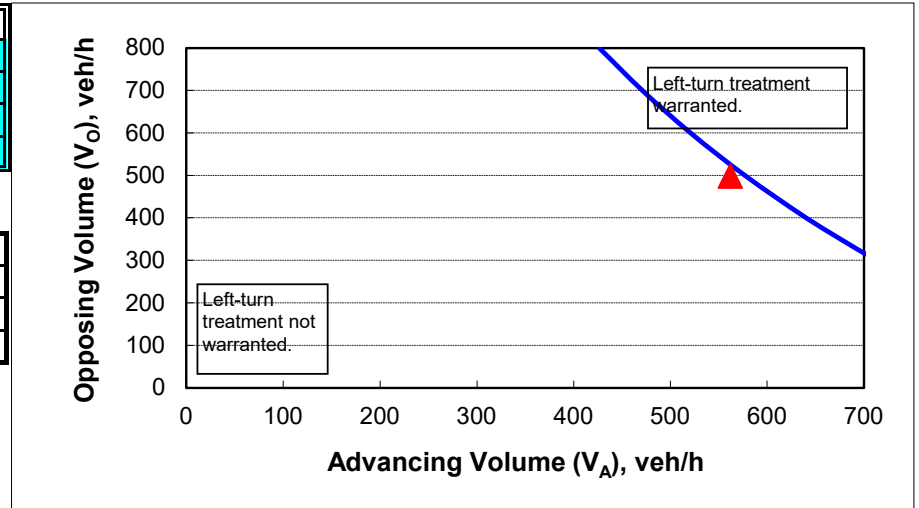
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 562 |
| Opposing volume (V_O), veh/h: | 498 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 578 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

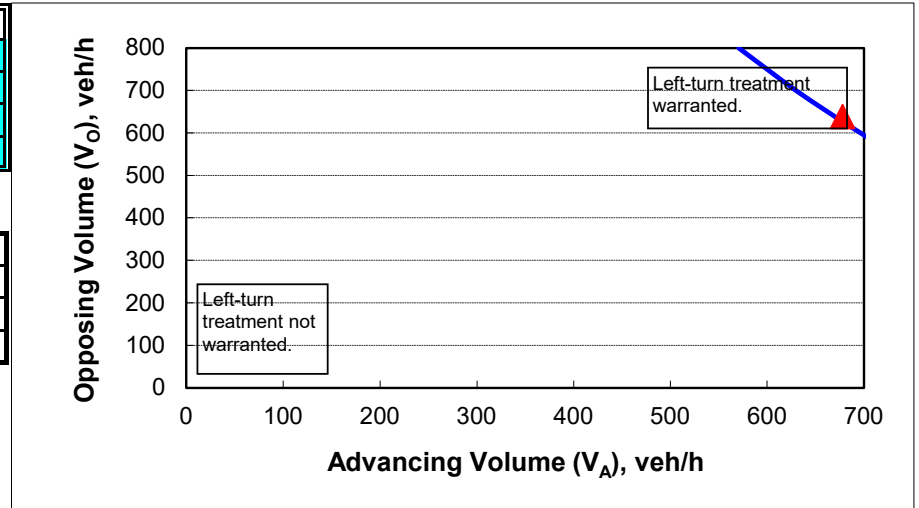
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 678 |
| Opposing volume (V_O), veh/h: | 638 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 670 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

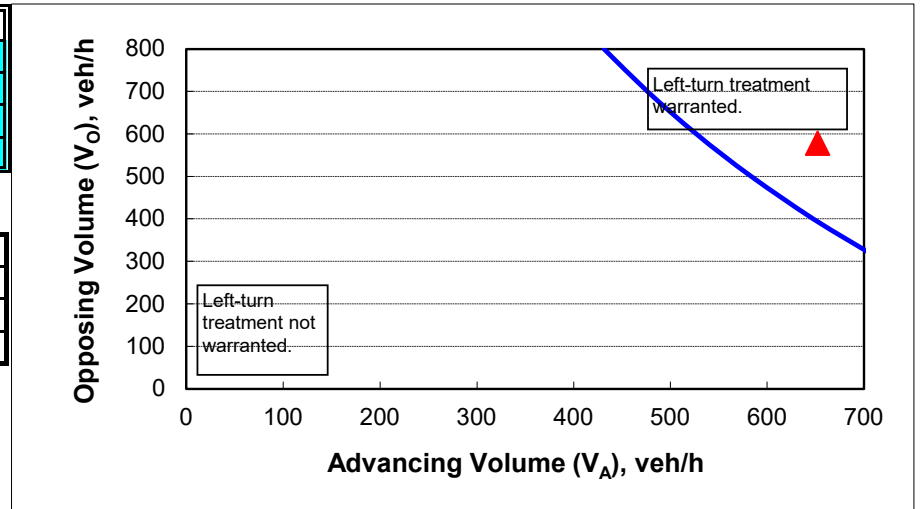
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 3% |
| Advancing volume (V_A), veh/h: | 652 |
| Opposing volume (V_O), veh/h: | 578 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 539 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1316 |
| Percentage of right-turns on minor road, %: | 10% |
| Minor-road volume (one direction), veh/h: | 61 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 96 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

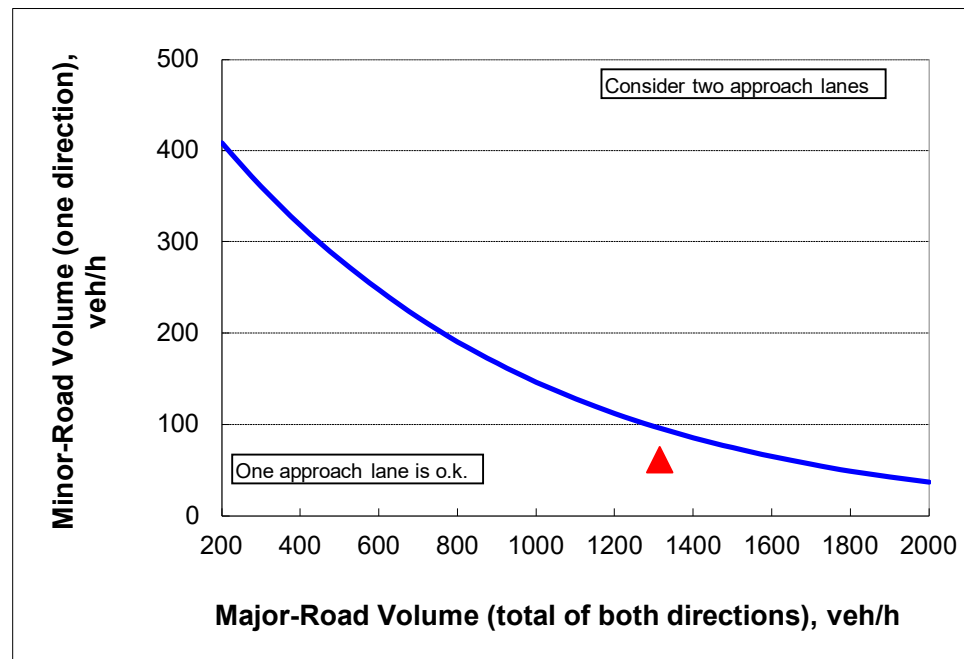


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1230 |
| Percentage of right-turns on minor road, %: | 23% |
| Minor-road volume (one direction), veh/h: | 60 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 120 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

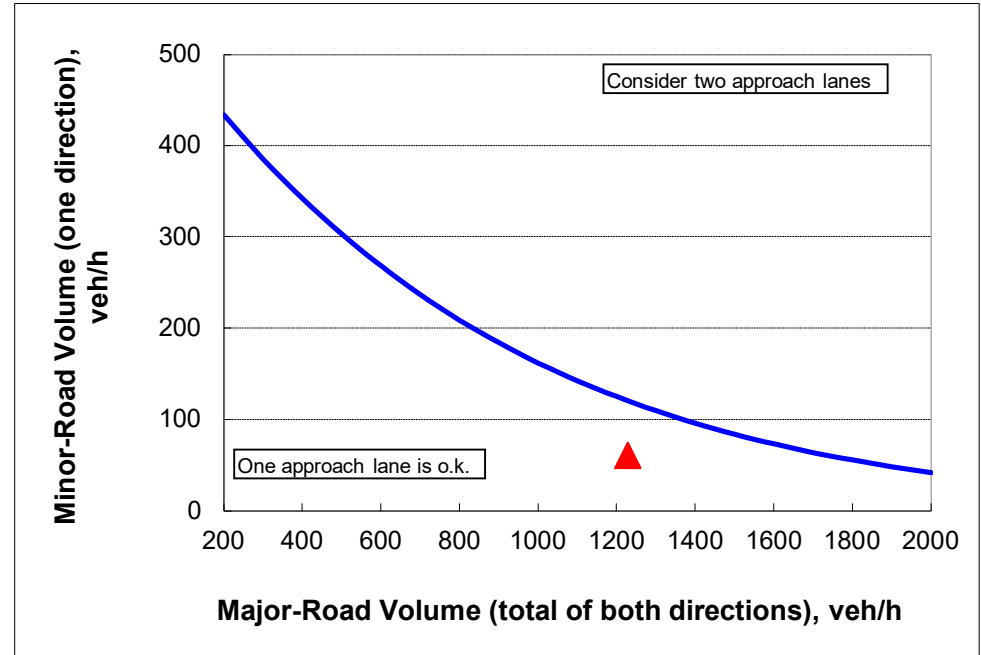


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 430 |
| Right-turn volume, veh/h: | 30 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 57 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

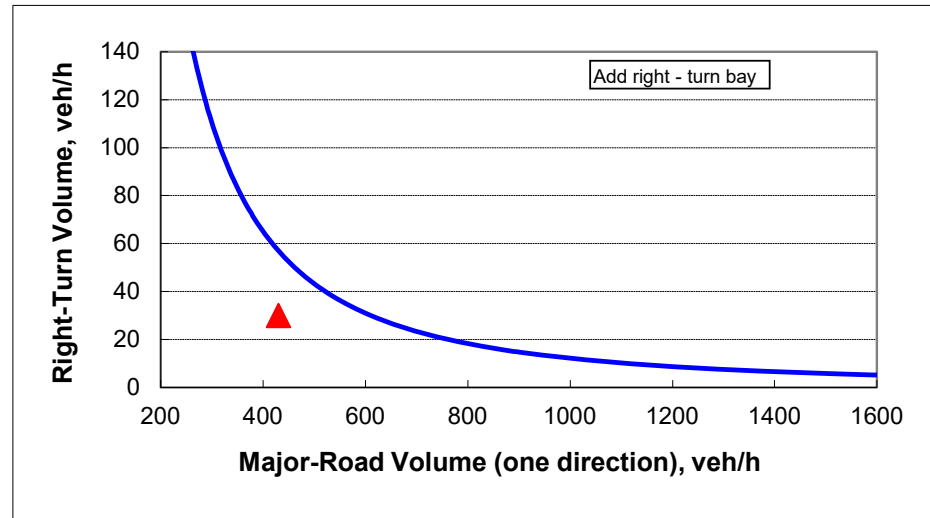


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 389 |
| Right-turn volume, veh/h: | 24 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 68 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

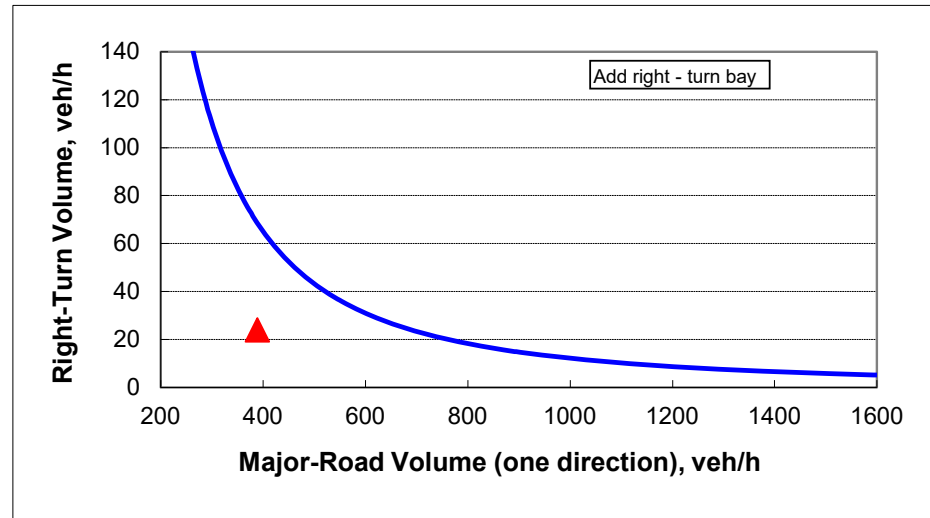


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 550 |
| Right-turn volume, veh/h: | 38 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 36 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

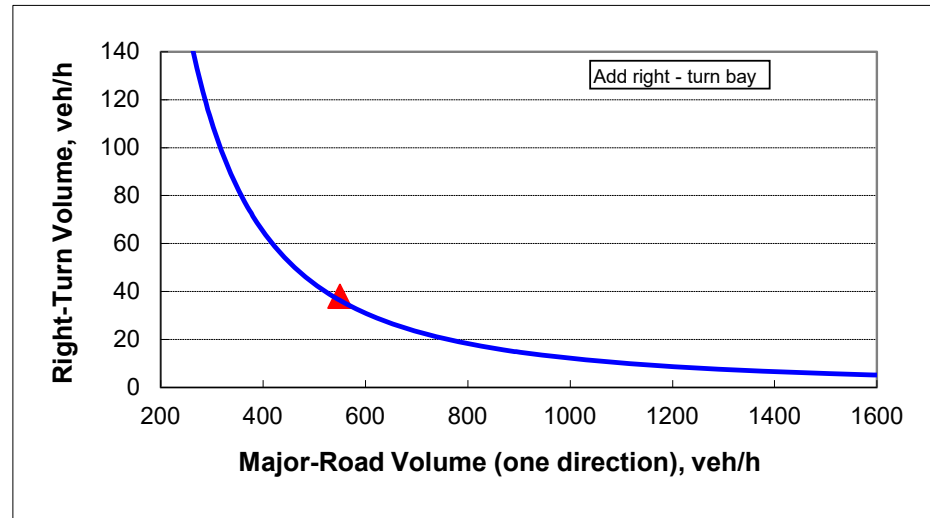


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 498 |
| Right-turn volume, veh/h: | 31 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 43 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

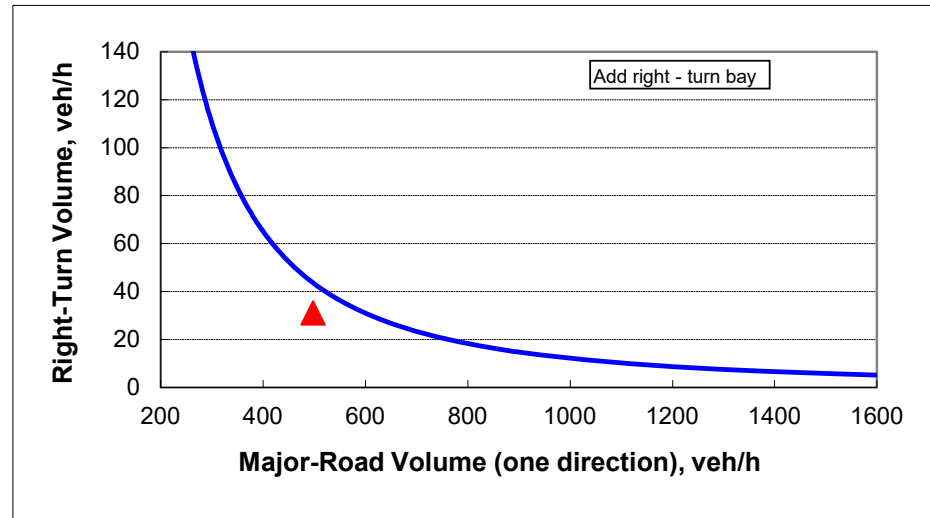


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

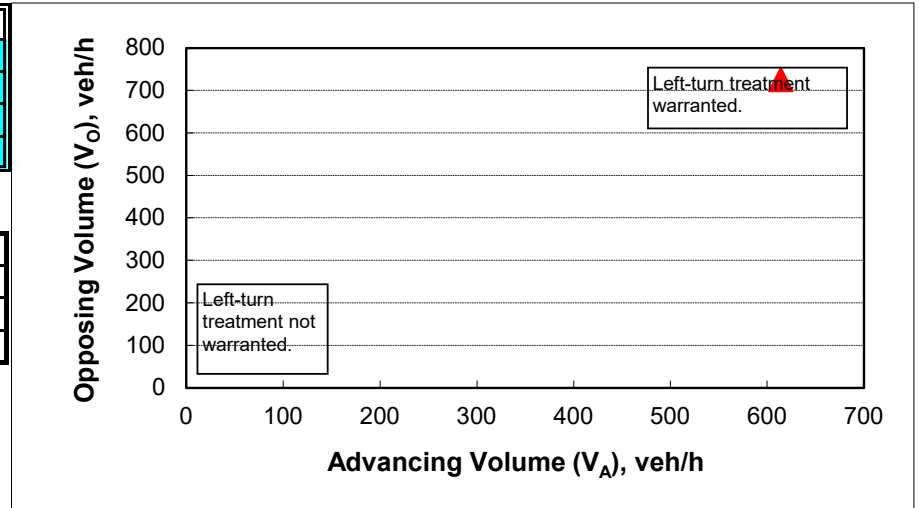
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 614 |
| Opposing volume (V_O), veh/h: | 726 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 823 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

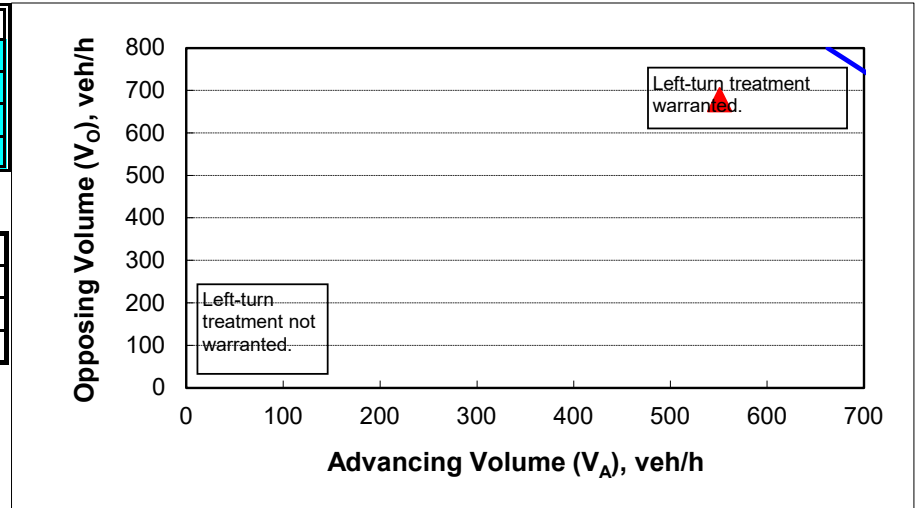
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 551 |
| Opposing volume (V_O), veh/h: | 678 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 748 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1340 |
| Percentage of right-turns on minor road, %: | 12% |
| Minor-road volume (one direction), veh/h: | 26 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 94 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

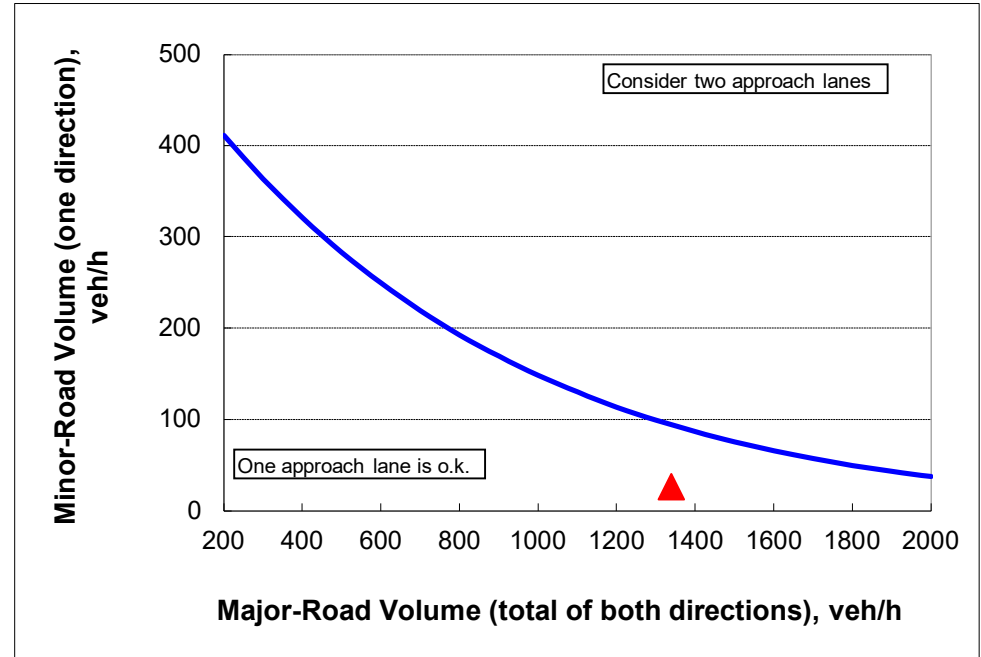


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1229 |
| Percentage of right-turns on minor road, %: | 17% |
| Minor-road volume (one direction), veh/h: | 52 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 115 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

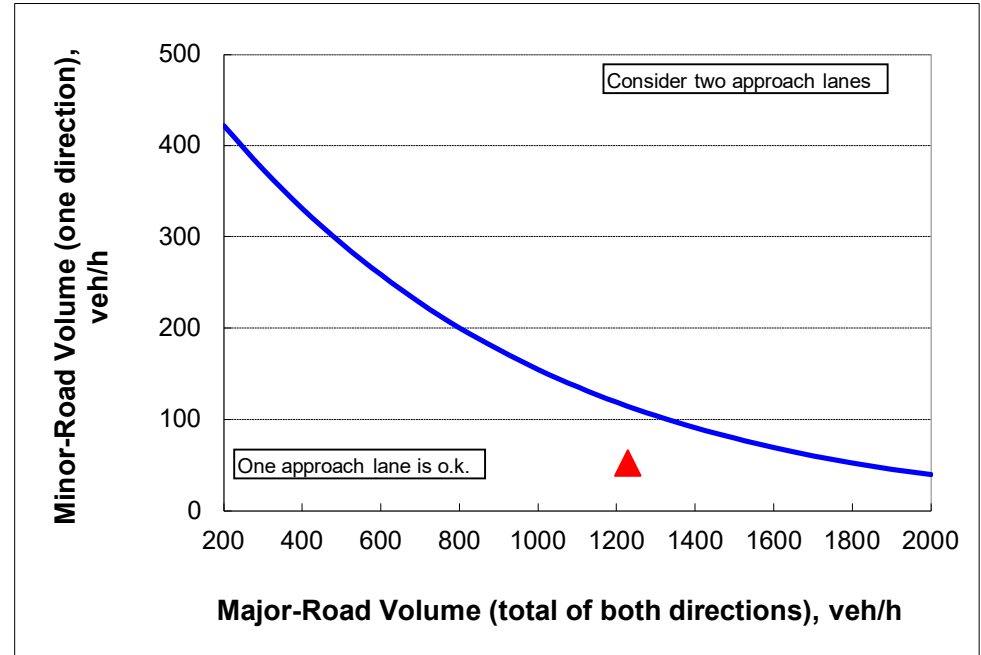


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 488 |
| Right-turn volume, veh/h: | 17 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 45 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

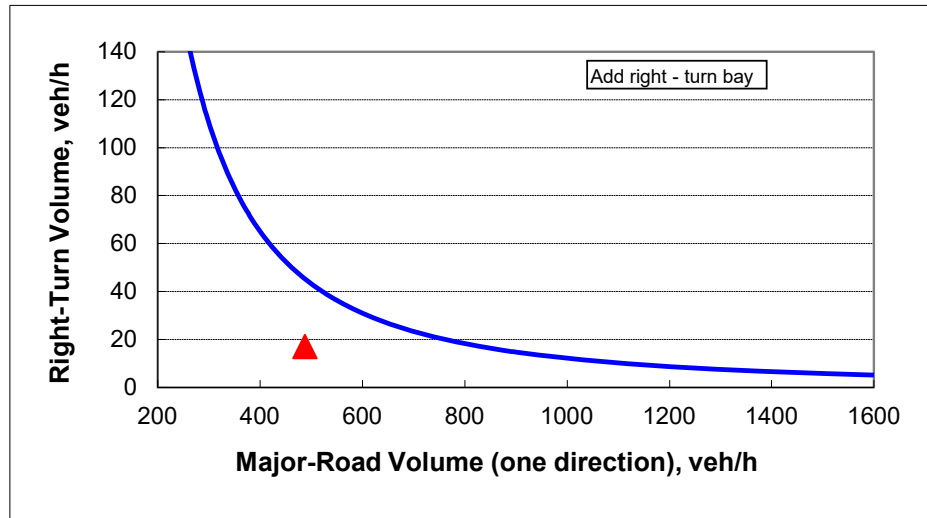


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 456 |
| Right-turn volume, veh/h: | 32 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 51 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

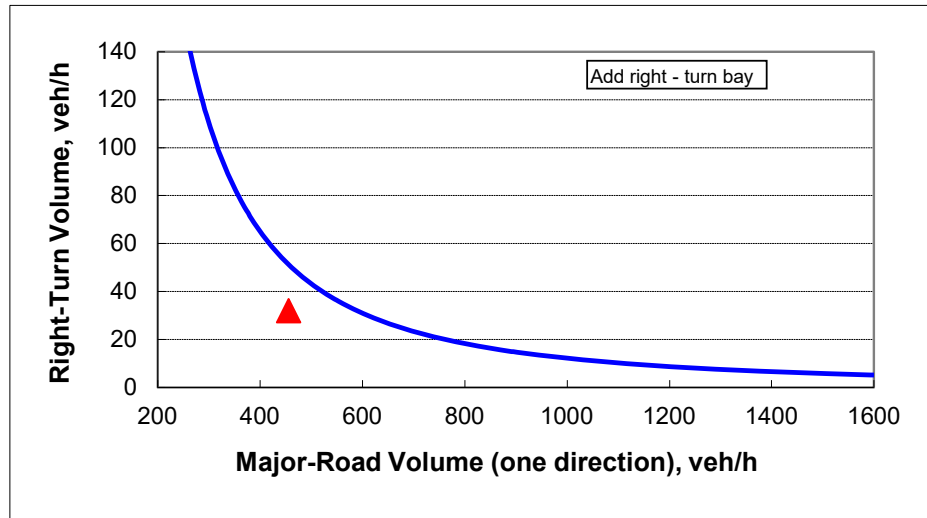


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 625 |
| Right-turn volume, veh/h: | 22 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 29 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

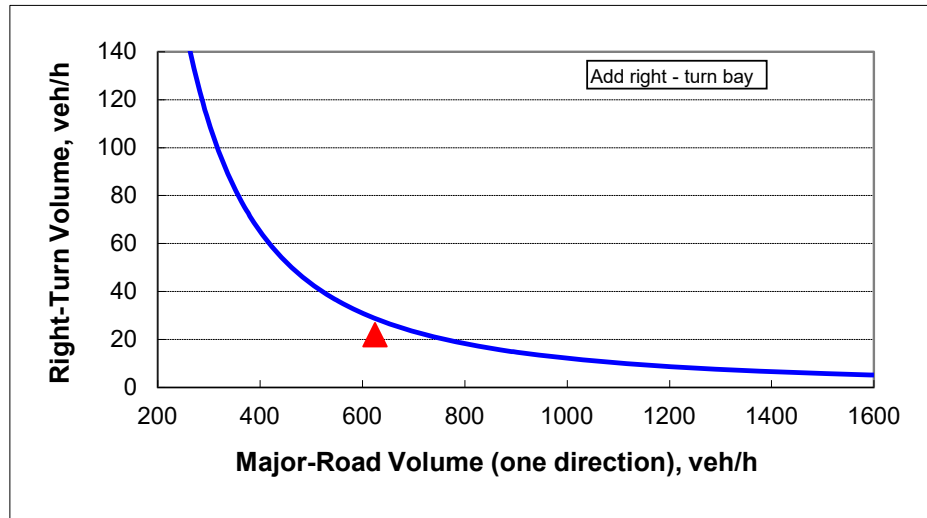


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 584 |
| Right-turn volume, veh/h: | 41 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 32 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Add right-turn bay. | |

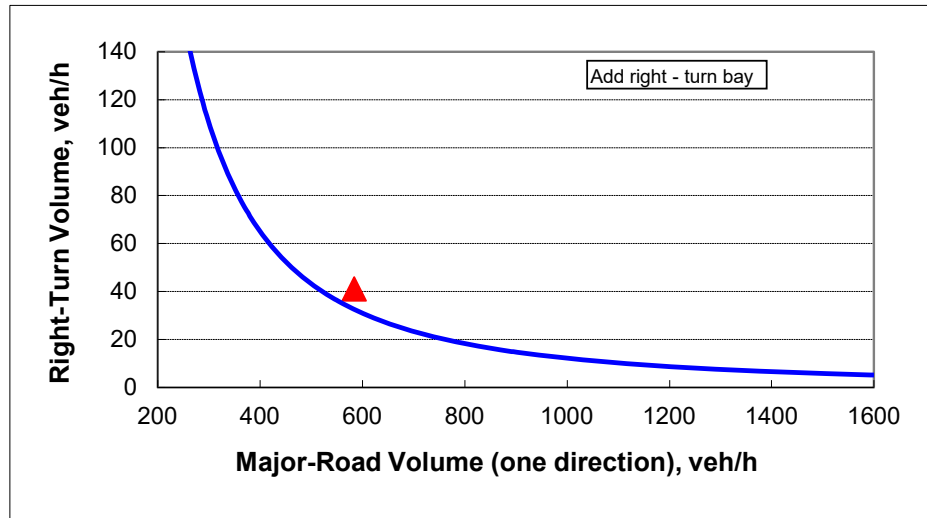


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

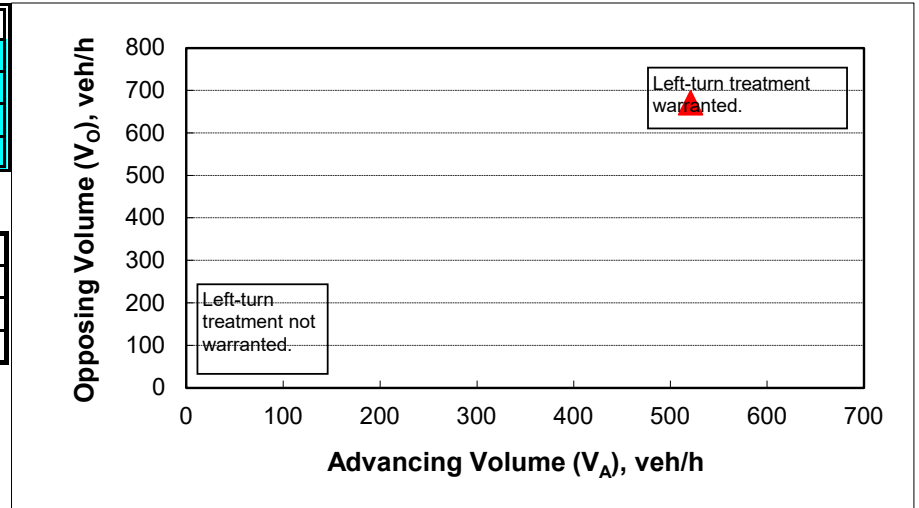
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 521 |
| Opposing volume (V_O), veh/h: | 671 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1033 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

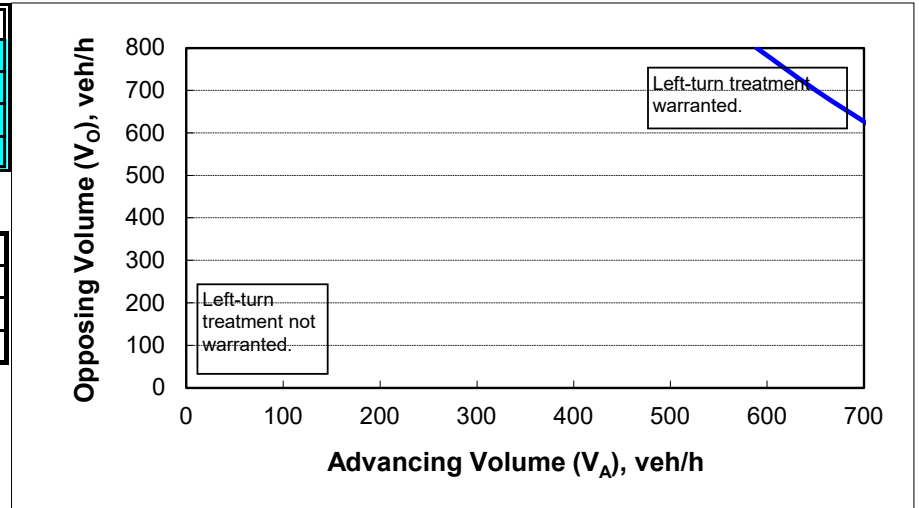
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 724 |
| Opposing volume (V_O), veh/h: | 537 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 767 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

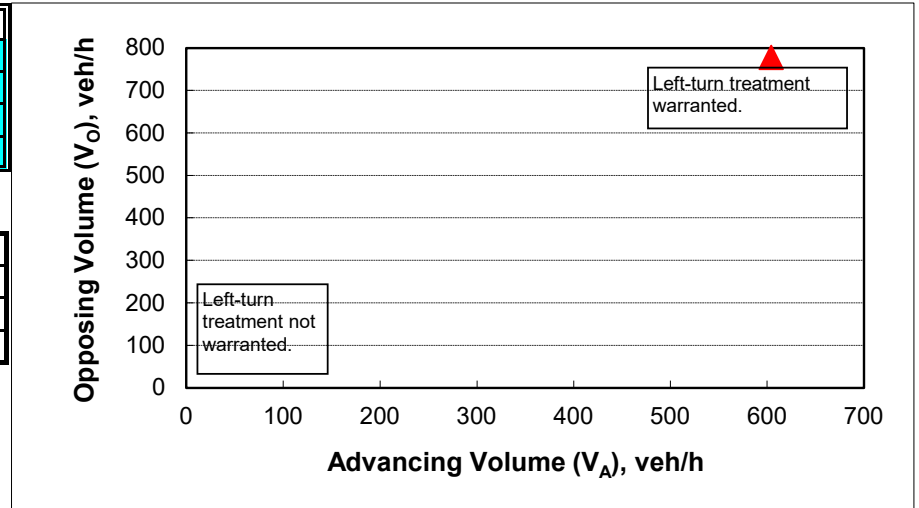
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 30 |
| Percent of left-turns in advancing volume (V_A), %: | 0% |
| Advancing volume (V_A), veh/h: | 604 |
| Opposing volume (V_O), veh/h: | 778 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 1195 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment NOT warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

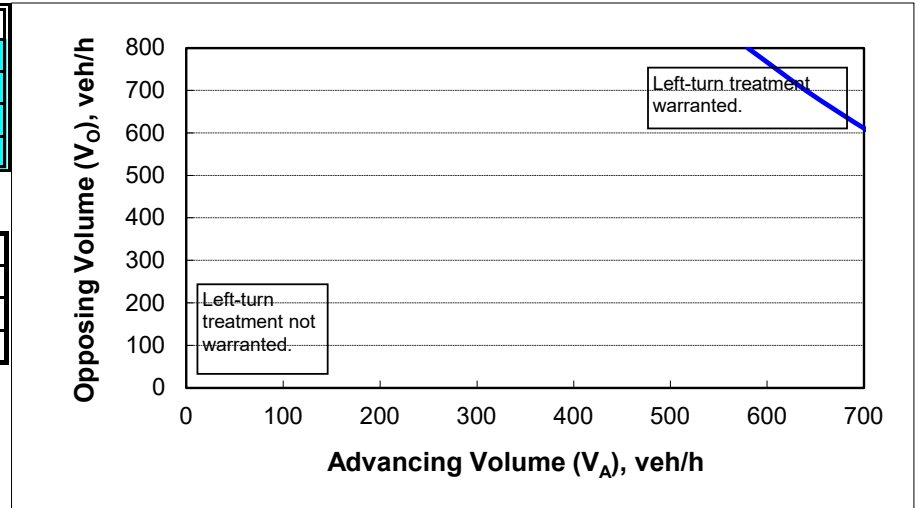
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 1% |
| Advancing volume (V_A), veh/h: | 841 |
| Opposing volume (V_O), veh/h: | 624 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 691 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1382 |
| Percentage of right-turns on minor road, %: | 94% |
| Minor-road volume (one direction), veh/h: | 85 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 268 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

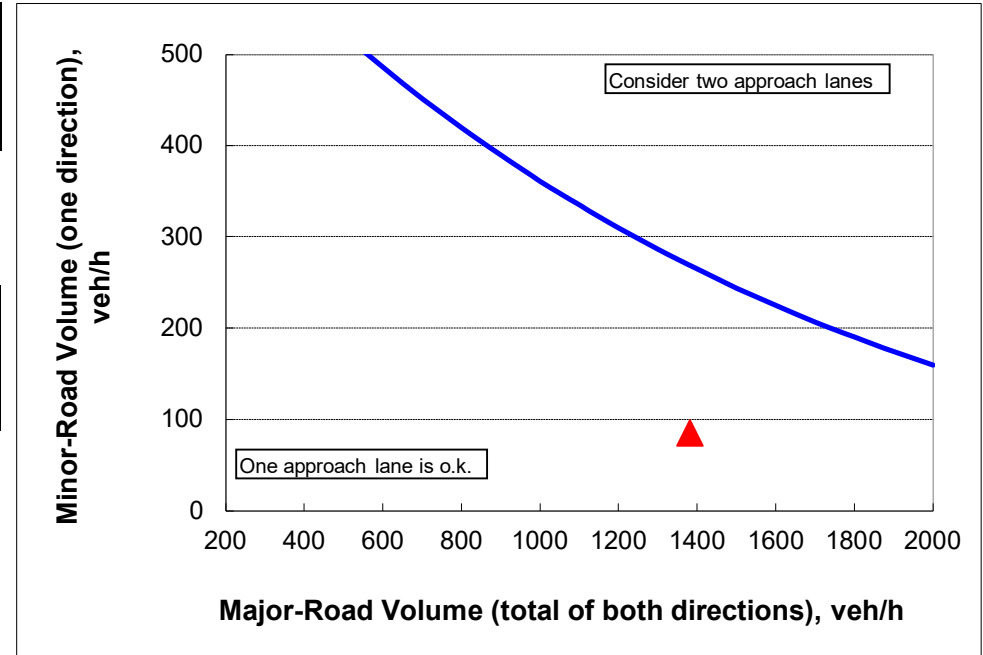


Figure 2 - 4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

INPUT

| Variable | Value |
|--|-------|
| Major-road volume (total of both directions), veh/h: | 1465 |
| Percentage of right-turns on minor road, %: | 77% |
| Minor-road volume (one direction), veh/h: | 92 |

OUTPUT

| Variable | Value |
|---|-------|
| Limiting minor-road volume (one direction), veh/h: | 174 |
| Guidance for determining minor-road approach geometry: | |
| ONE approach lane is o.k. | |

CALIBRATION CONSTANTS

| Minor Road | Critical gap, s: | Follow-up gap, s: |
|---------------------------------------|------------------|-------------------|
| Right-turn capacity, veh/h: | 6.2 | 3.3 |
| Left-turn and through capacity veh/h: | 6.5 | 4.0 |

* according to Table 17 - 5 of the HCM

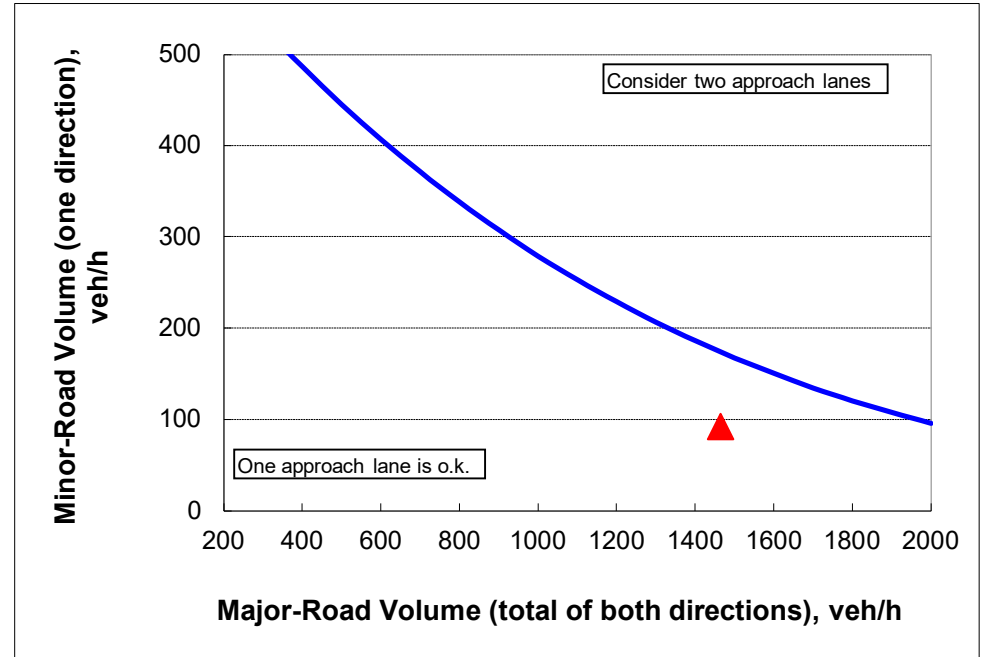


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| | |
|---|----------------|
| Roadway geometry: | 2-lane roadway |
| Variable | Value |
| Major-road speed, mph: | 30 |
| Major-road volume (one direction), veh/h: | 778 |
| Right-turn volume, veh/h: | 3 |

OUTPUT

| | |
|--|-------|
| Variable | Value |
| Limiting right-turn volume, veh/h: | 66 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

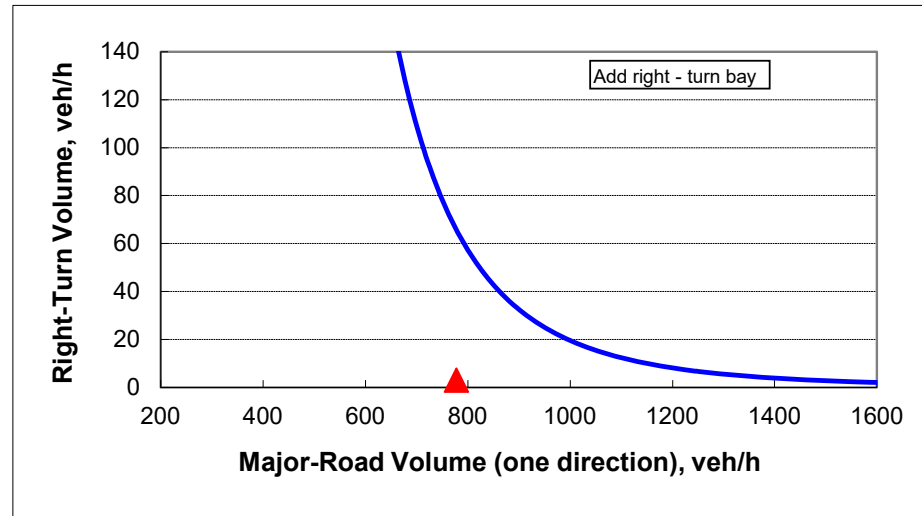


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

| Roadway geometry: | 2-lane roadway |
|---|----------------|
| Variable | Value |
| Major-road speed, mph: | 45 |
| Major-road volume (one direction), veh/h: | 624 |
| Right-turn volume, veh/h: | 12 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting right-turn volume, veh/h: | 29 |
| Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway: | |
| Do NOT add right-turn bay. | |

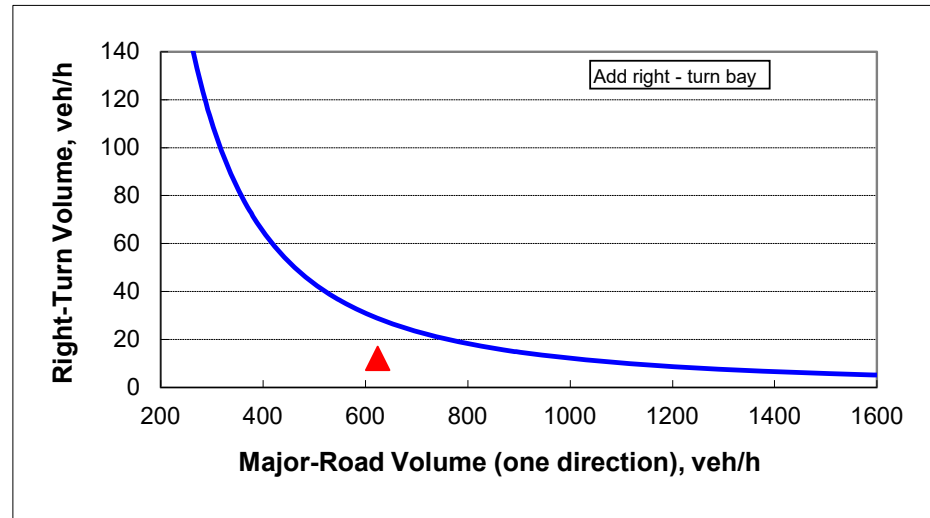


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

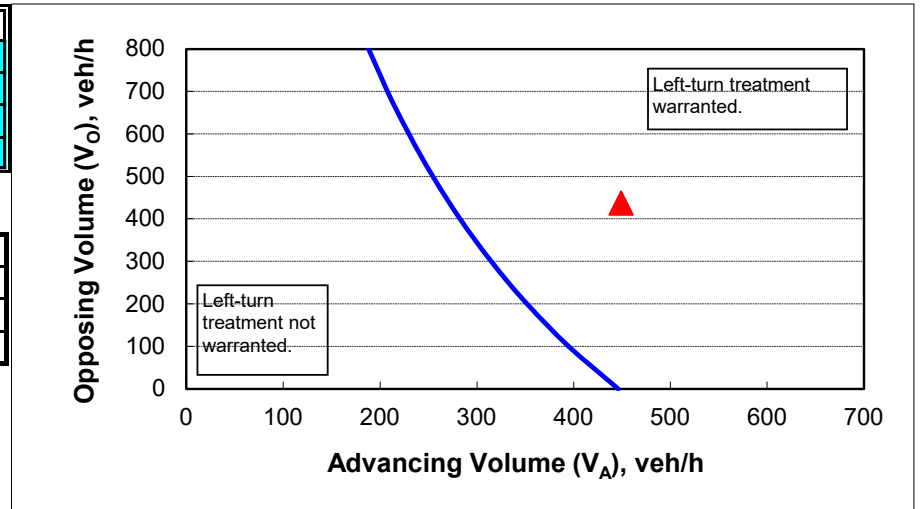
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 30 |
| Percent of left-turns in advancing volume (V_A), %: | 26% |
| Advancing volume (V_A), veh/h: | 449 |
| Opposing volume (V_O), veh/h: | 437 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 272 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

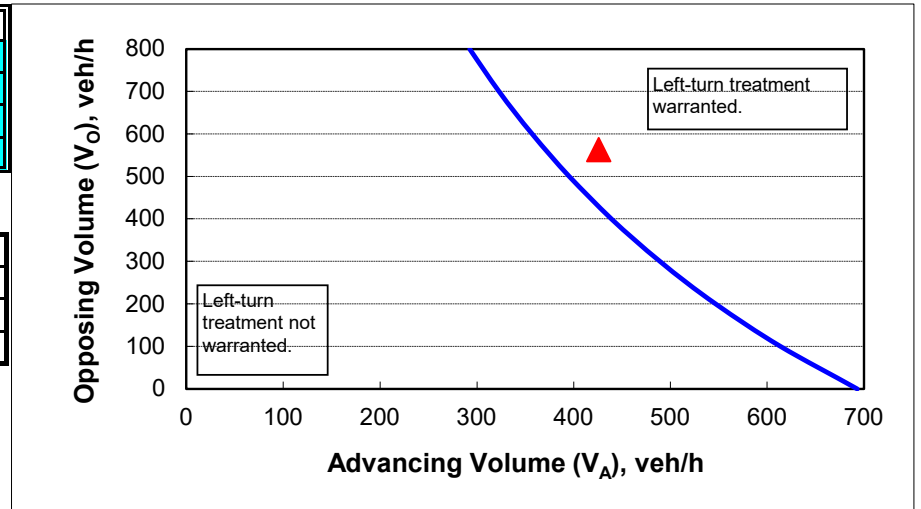
2-lane roadway (English)

INPUT

| Variable | Value |
|---|-------|
| 85 th percentile speed, mph: | 45 |
| Percent of left-turns in advancing volume (V_A), %: | 6% |
| Advancing volume (V_A), veh/h: | 426 |
| Opposing volume (V_O), veh/h: | 563 |

OUTPUT

| Variable | Value |
|--|-------|
| Limiting advancing volume (V_A), veh/h: | 371 |
| Guidance for determining the need for a major-road left-turn bay: | |
| Left-turn treatment warranted. | |



CALIBRATION CONSTANTS

| Variable | Value |
|--|-------|
| Average time for making left-turn, s: | 3.0 |
| Critical headway, s: | 5.0 |
| Average time for left-turn vehicle to clear the advancing lane, s: | 1.9 |

Warrant 1 - Eight-Hour Vehicular Volume

Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)



| | | |
|--|--------------------|----------------------|
| Name Number of Lanes by Approach | Major Road | Minor Road |
| | E Cherokee Dr 1 | Ranchwood Trail 1 |

| | | |
|--------------------------------|------|--------------------------|
| % of Volume | 100% | Data Year 2029 |
| Right Turn Reduction? | Yes | Future Year 2039 |
| 15 Min Interval Start | 0 | Growth Rate 1.50% |
| Mainline Left as Minor? | No | |

| Time Of Day | E Cherokee Dr | | Ranchwood Trail | | Warrant 1, Combination A&B | | | | | | | |
|------------------------------|-----------------|------------------|-------------------------|----------------|----------------------------|----------------|-------------------------|----------------|----------------|----------------|----------------|----------------|
| | Major Road | | Minor Road | | Warrant 1, Condition A | | Warrant 1, Condition B | | Condition A | | Condition B | |
| | Volume (vph) | Volume (vph) | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? | Condition Met? |
| | Both Approaches | Highest Approach | > 500 vph | > 150 vph | > 750 vph | > 75 vph | > 400 vph | > 120 vph | > 600 vph | > 60 vph | > 60 vph | > 60 vph |
| 12:00 AM to 1:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 1:00 AM to 2:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 2:00 AM to 3:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 3:00 AM to 4:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 4:00 AM to 5:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 5:00 AM to 6:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 6:00 AM to 7:00 AM | 903 | 131 | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 7:00 AM to 8:00 AM | 1427 | 185 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 8:00 AM to 9:00 AM | 1530 | 158 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 9:00 AM to 10:00 AM | 1150 | 47 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 10:00 AM to 11:00 AM | 1110 | 50 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 11:00 AM to 12:00 PM | 1224 | 47 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 12:00 PM to 1:00 PM | 1189 | 42 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 1:00 PM to 2:00 PM | 1286 | 53 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 2:00 PM to 3:00 PM | 1344 | 40 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 3:00 PM to 4:00 PM | 1651 | 55 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 4:00 PM to 5:00 PM | 1979 | 57 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 5:00 PM to 6:00 PM | 1889 | 75 | Yes | No | Yes | No | Yes | No | Yes | No | Yes | Yes |
| 6:00 PM to 7:00 PM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 7:00 PM to 8:00 PM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 8:00 PM to 9:00 PM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 9:00 PM to 10:00 PM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 10:00 PM to 11:00 PM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| 11:00 PM to 12:00 AM | 0 | 0 | No | No | No | No | No | No | No | No | No | No |
| Total Hours Condition is Met | | | 2 | | 3 | | 3 | | | | | |
| Meets Warrant? | | | No - Warrant is Not Met | | No - Warrant is Not Met | | No - Warrant is Not Met | | | | | |

Warrant 2 - Four-Hour Vehicular Volume

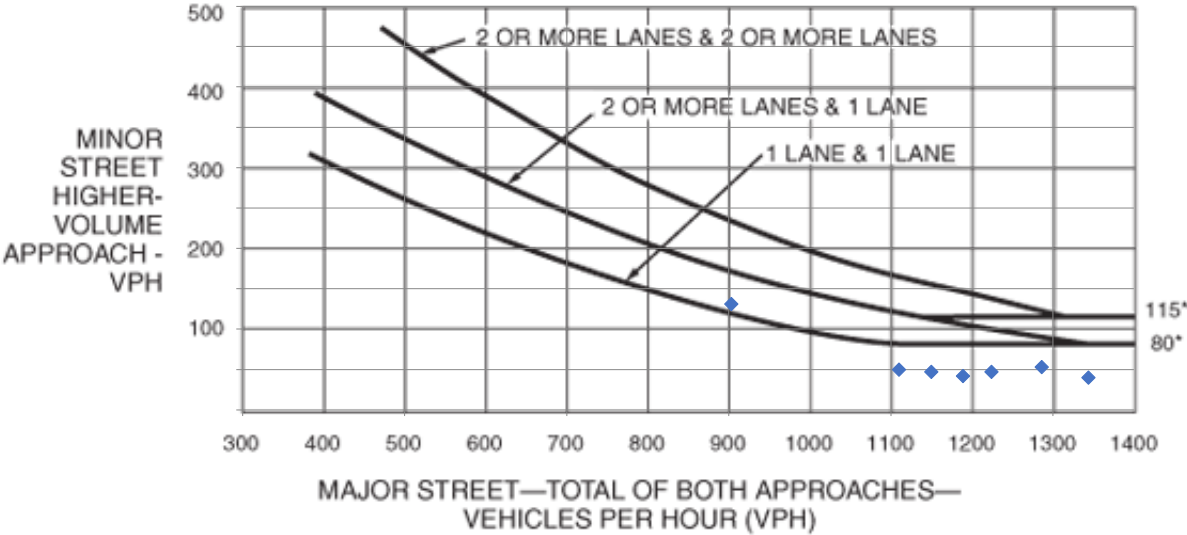
Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

| | Major Road | Minor Road |
|-----------------------------|---------------|-----------------|
| Name | E Cherokee Dr | Ranchwood Trail |
| Number of Lanes by Approach | 1 | 1 |

| | | | |
|-------------------------|------|-------------|-------|
| % of Volume | 100% | Data Year | 2029 |
| Right Turn Reduction? | Yes | Future Year | 2039 |
| 15 Min Interval Start | 0 | Growth Rate | 1.50% |
| Mainline Left as Minor? | No | | |

| Time Of Day | E Cherokee Dr | Ranchwood Trail | Warrant 2 Four-Hour Vehicular Volume Condition Met? |
|------------------------------|---|--|--|
| | Major Road Volume (vph) Both Approaches | Minor Road Volume (vph) Highest Approach | |
| 12:00 AM to 1:00 AM | 0 | 0 | No |
| 1:00 AM to 2:00 AM | 0 | 0 | No |
| 2:00 AM to 3:00 AM | 0 | 0 | No |
| 3:00 AM to 4:00 AM | 0 | 0 | No |
| 4:00 AM to 5:00 AM | 0 | 0 | No |
| 5:00 AM to 6:00 AM | 0 | 0 | No |
| 6:00 AM to 7:00 AM | 903 | 131 | Yes |
| 7:00 AM to 8:00 AM | 1427 | 185 | Yes |
| 8:00 AM to 9:00 AM | 1530 | 158 | Yes |
| 9:00 AM to 10:00 AM | 1150 | 47 | No |
| 10:00 AM to 11:00 AM | 1110 | 50 | No |
| 11:00 AM to 12:00 PM | 1224 | 47 | No |
| 12:00 PM to 1:00 PM | 1189 | 42 | No |
| 1:00 PM to 2:00 PM | 1286 | 53 | No |
| 2:00 PM to 3:00 PM | 1344 | 40 | No |
| 3:00 PM to 4:00 PM | 1651 | 55 | No |
| 4:00 PM to 5:00 PM | 1979 | 57 | No |
| 5:00 PM to 6:00 PM | 1889 | 75 | No |
| 6:00 PM to 7:00 PM | 0 | 0 | No |
| 7:00 PM to 8:00 PM | 0 | 0 | No |
| 8:00 PM to 9:00 PM | 0 | 0 | No |
| 9:00 PM to 10:00 PM | 0 | 0 | No |
| 10:00 PM to 11:00 PM | 0 | 0 | No |
| 11:00 PM to 12:00 AM | 0 | 0 | No |
| Total Hours Condition is Met | | | 3 |
| Meets Warrant? | | | No - Warrant is Not Met |

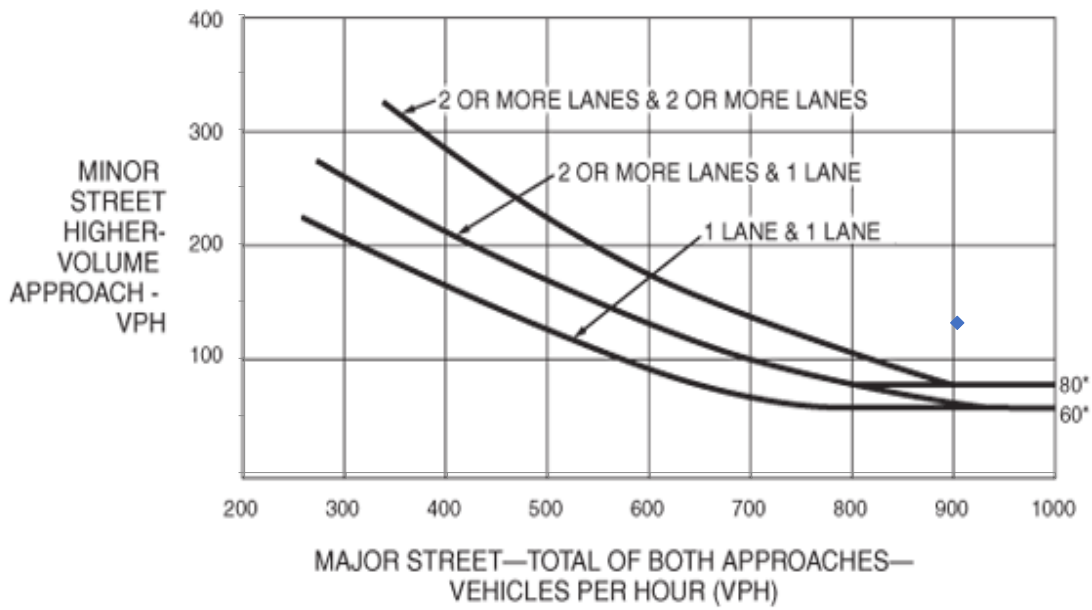
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.



Warrant 1 - Peak-Hour Vehicular Volume

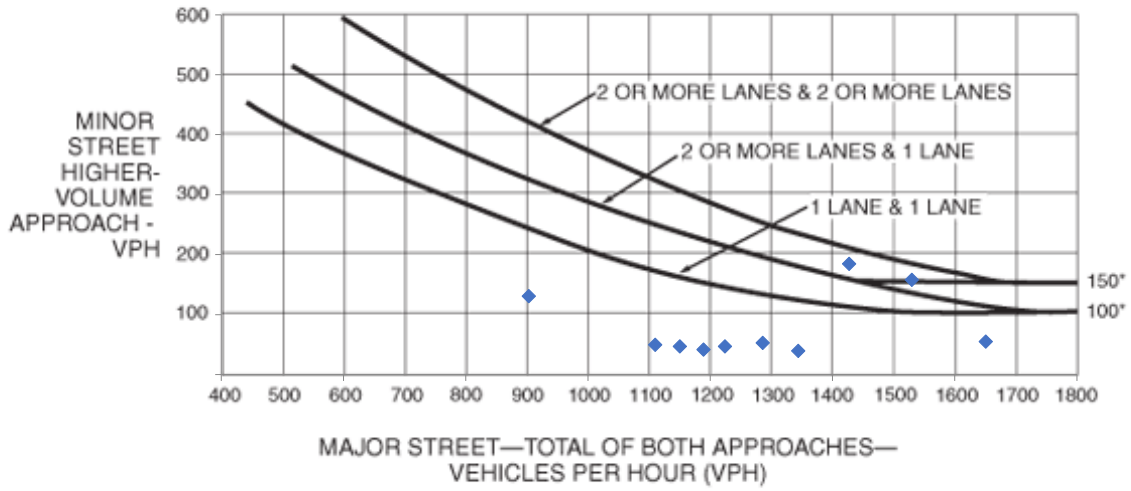
Based on Section 4C.02 of the Manual on Uniform Traffic Control Devices, 2009 Edition (rev. 2)

| | Major Road | Minor Road |
|------------------------------------|---------------|-----------------|
| Name | E Cherokee Dr | Ranchwood Trail |
| Number of Lanes by Approach | 2 | 1 |

| | | | |
|--------------------------------|------|--------------------|-------|
| % of Volume | 100% | Data Year | 2029 |
| Right Turn Reduction? | Yes | Future Year | 2039 |
| 15 Min Interval Start | 0 | Growth Rate | 1.50% |
| Mainline Left as Minor? | No | | |

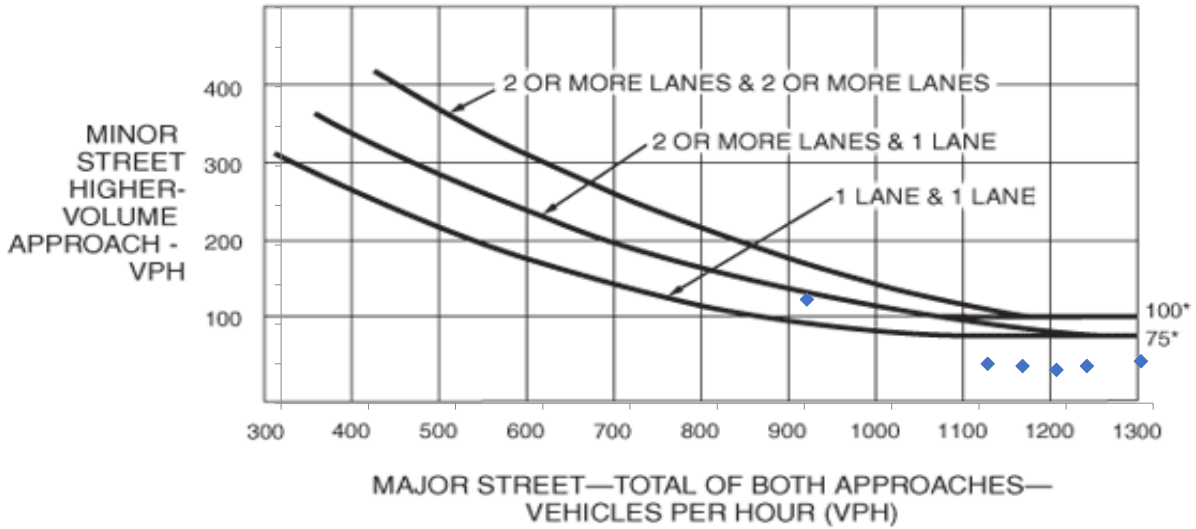
| Time Of Day | E Cherokee Dr | Ranchwood Trail | Warrant 3 Peak-Hour Vehicular Volume Condition Met? |
|------------------------------|---|--|--|
| | Major Road Volume (vph) Both Approaches | Minor Road Volume (vph) Highest Approach | |
| 12:00 AM to 1:00 AM | 0 | 0 | No |
| 1:00 AM to 2:00 AM | 0 | 0 | No |
| 2:00 AM to 3:00 AM | 0 | 0 | No |
| 3:00 AM to 4:00 AM | 0 | 0 | No |
| 4:00 AM to 5:00 AM | 0 | 0 | No |
| 5:00 AM to 6:00 AM | 0 | 0 | No |
| 6:00 AM to 7:00 AM | 903 | 131 | No |
| 7:00 AM to 8:00 AM | 1427 | 185 | Yes |
| 8:00 AM to 9:00 AM | 1530 | 158 | Yes |
| 9:00 AM to 10:00 AM | 1150 | 47 | No |
| 10:00 AM to 11:00 AM | 1110 | 50 | No |
| 11:00 AM to 12:00 PM | 1224 | 47 | No |
| 12:00 PM to 1:00 PM | 1189 | 42 | No |
| 1:00 PM to 2:00 PM | 1286 | 53 | No |
| 2:00 PM to 3:00 PM | 1344 | 40 | No |
| 3:00 PM to 4:00 PM | 1651 | 55 | No |
| 4:00 PM to 5:00 PM | 1979 | 57 | No |
| 5:00 PM to 6:00 PM | 1889 | 75 | No |
| 6:00 PM to 7:00 PM | 0 | 0 | No |
| 7:00 PM to 8:00 PM | 0 | 0 | No |
| 8:00 PM to 9:00 PM | 0 | 0 | No |
| 9:00 PM to 10:00 PM | 0 | 0 | No |
| 10:00 PM to 11:00 PM | 0 | 0 | No |
| 11:00 PM to 12:00 AM | 0 | 0 | No |
| Total Hours Condition is Met | | | 2 |
| Meets Warrant? | | | Yes - Warrant is Met |

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.