

final report

July 22, 2022

Traffic Impact Study

One Park North
Lexington Road at Grinstead Drive
Louisville, KY

Prepared for

Louisville Metro Planning Commission
Kentucky Transportation Cabinet



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INTRODUCTION

One Park North is proposed on Lexington Road between Grinstead Drive and Etley Avenue. The development plan shows a mix of condominiums, office, grocery, and retail. The size of each use is detailed in Trip Generation. **Figure 1** displays a map of the site. Access to the site will be from Lexington Road. The purpose of this study is to examine the traffic impacts of the proposed development upon the adjacent highway system. For this study the impact area was defined to be the intersections of Lexington Road at Payne Street, Etley Avenue, Grinstead Drive, Alta Vista Road, and Grinstead Drive at Cherokee Road, at I 64 eastbound ramps and at I 64 westbound ramps.

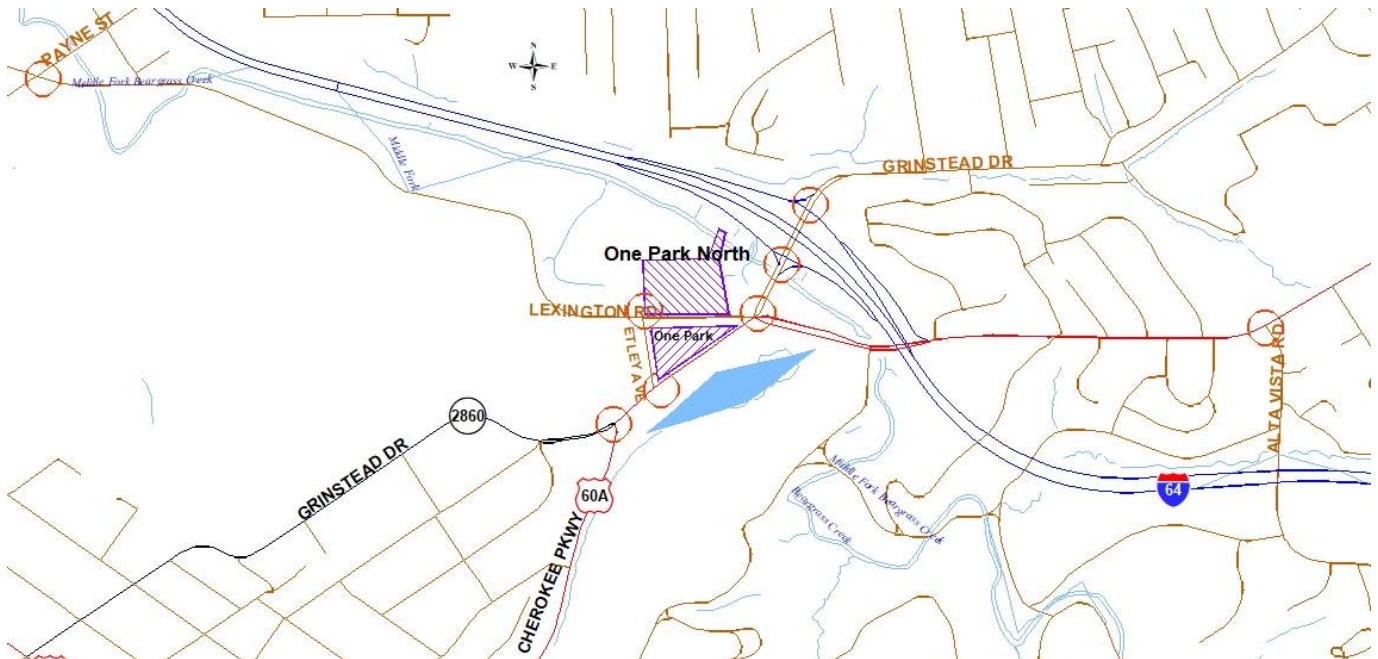


Figure 1. Site Map

EXISTING CONDITIONS

Lexington Road is maintained by Louisville Metro. The road is a two-lane road with a center turn lane, bike lanes and curb and gutter. The posted speed limit is 35 mph. There are sidewalks on both sides of the street at the project site. The intersection with Grinstead Drive, Payne Street and Alta Vista Road are controlled with traffic signals. There are left turn lanes at each intersection.

Grinstead Drive is maintained by the Kentucky Transportation Cabinet (KYTC). The road is a four-lane road with eleven-foot lanes and curb and gutter. The posted speed limit is 35 mph. North of Lexington Road there are sidewalks on west side of the street at the project site. The intersection with Cherokee Parkway and the I 64 ramps are controlled with traffic signals. There are left turn lanes at each intersection.

A.m. and p.m. peak hour traffic counts were obtained at the intersections on April 26, 2022 (see Appendix). The time of the peak hours varied between the intersections. Signal timing files were provided by Metro Public Works, Division of Traffic Engineering. **Figures 2 and 3** illustrate the existing peak hour traffic volumes.

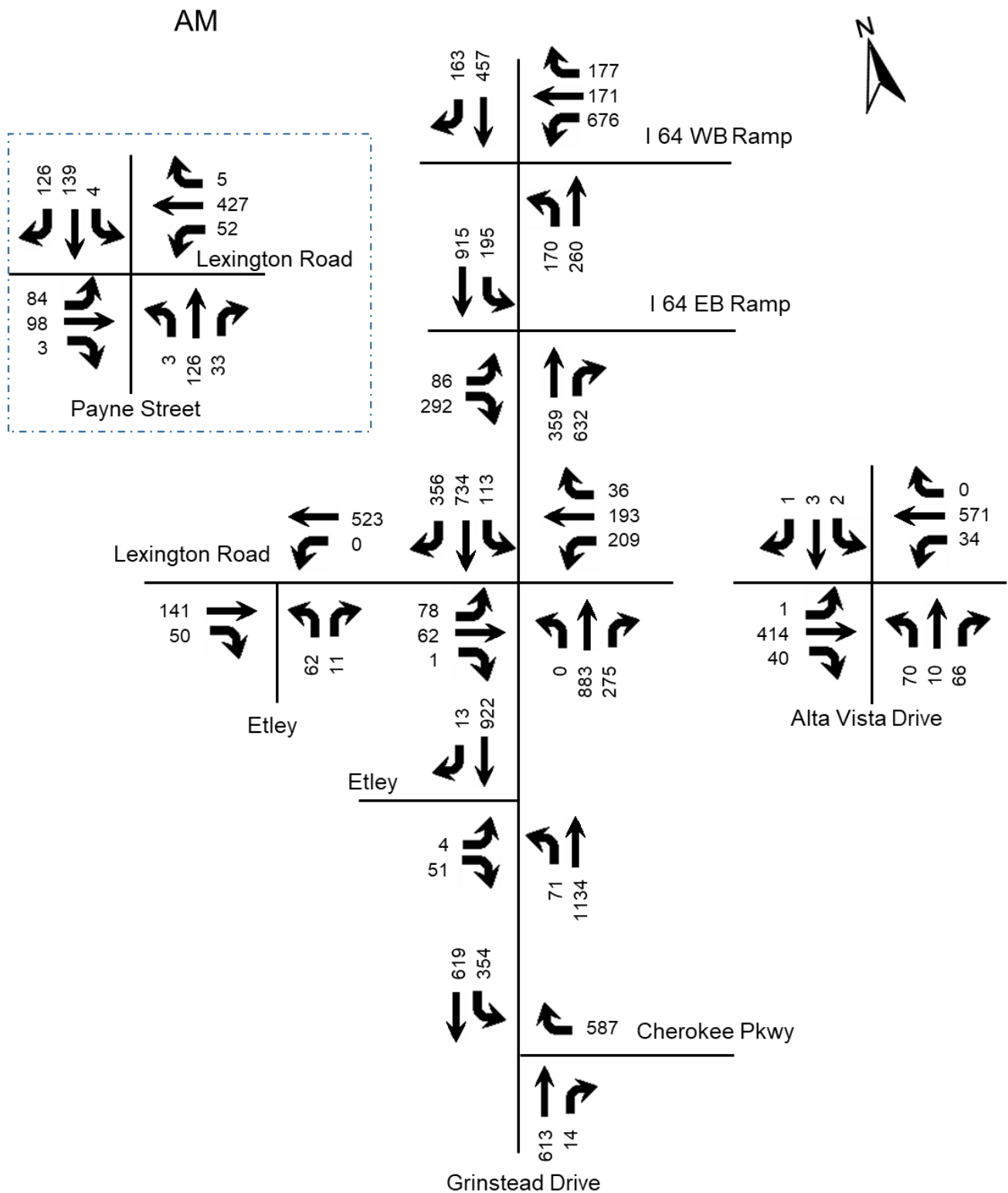


Figure 2. AM Existing Peak Hour Volumes

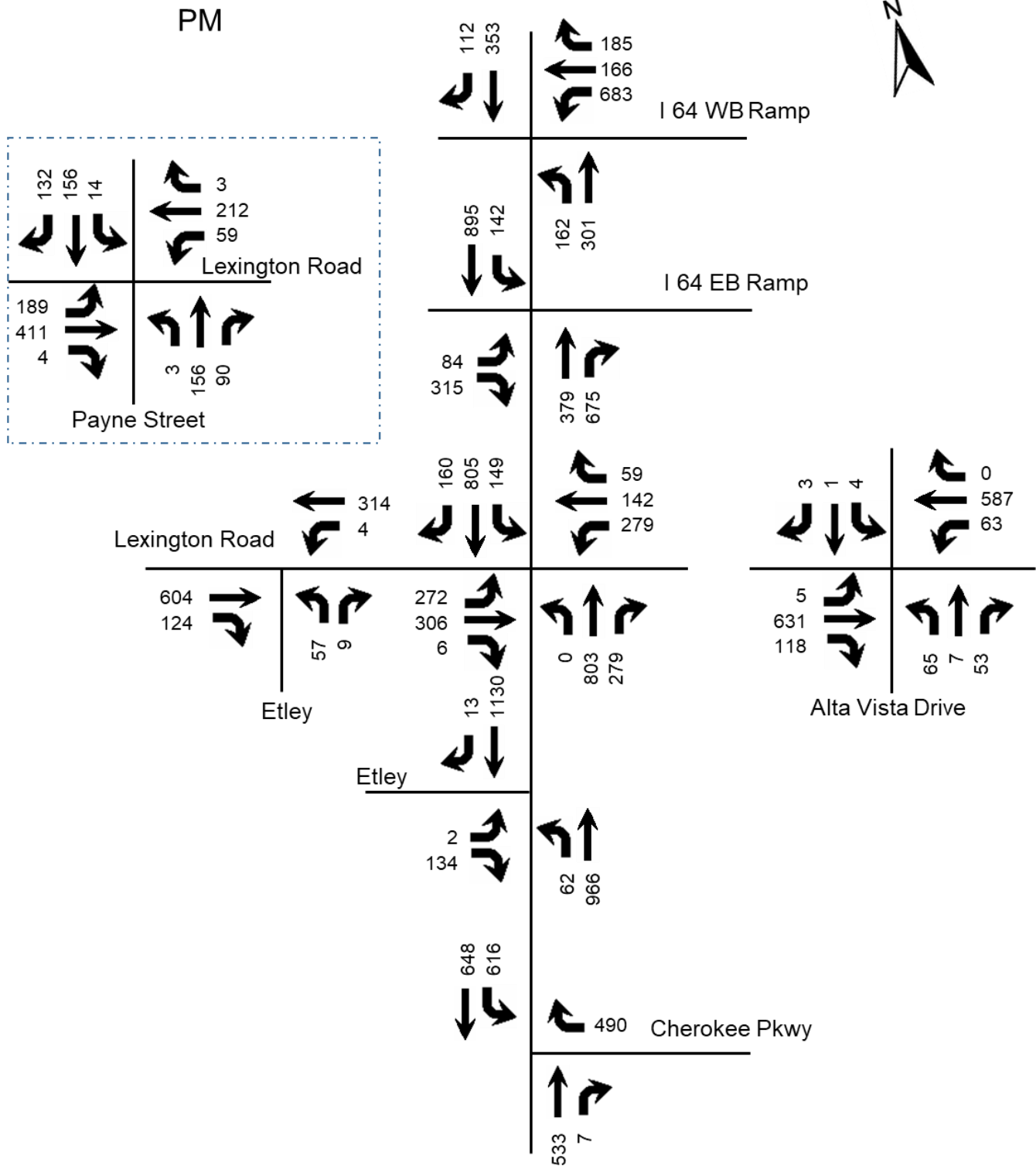


Figure 3. PM Existing Peak Hour Volumes

FUTURE CONDITIONS

The projected completion year for this development is 2026, so the analysis year for this study is 2026. To predict traffic conditions in 2026, one percent annual growth in traffic was added to the counts. This growth is based upon a review of the historical count data of the Kentucky Transportation Cabinet. Additionally, trip generation and distribution for One Park has been included. The trip generation and distribution is taken from the traffic impact study for One Park dated August 26, 2019. **Figures 4 and 5** displays the 2026 No Build volumes.

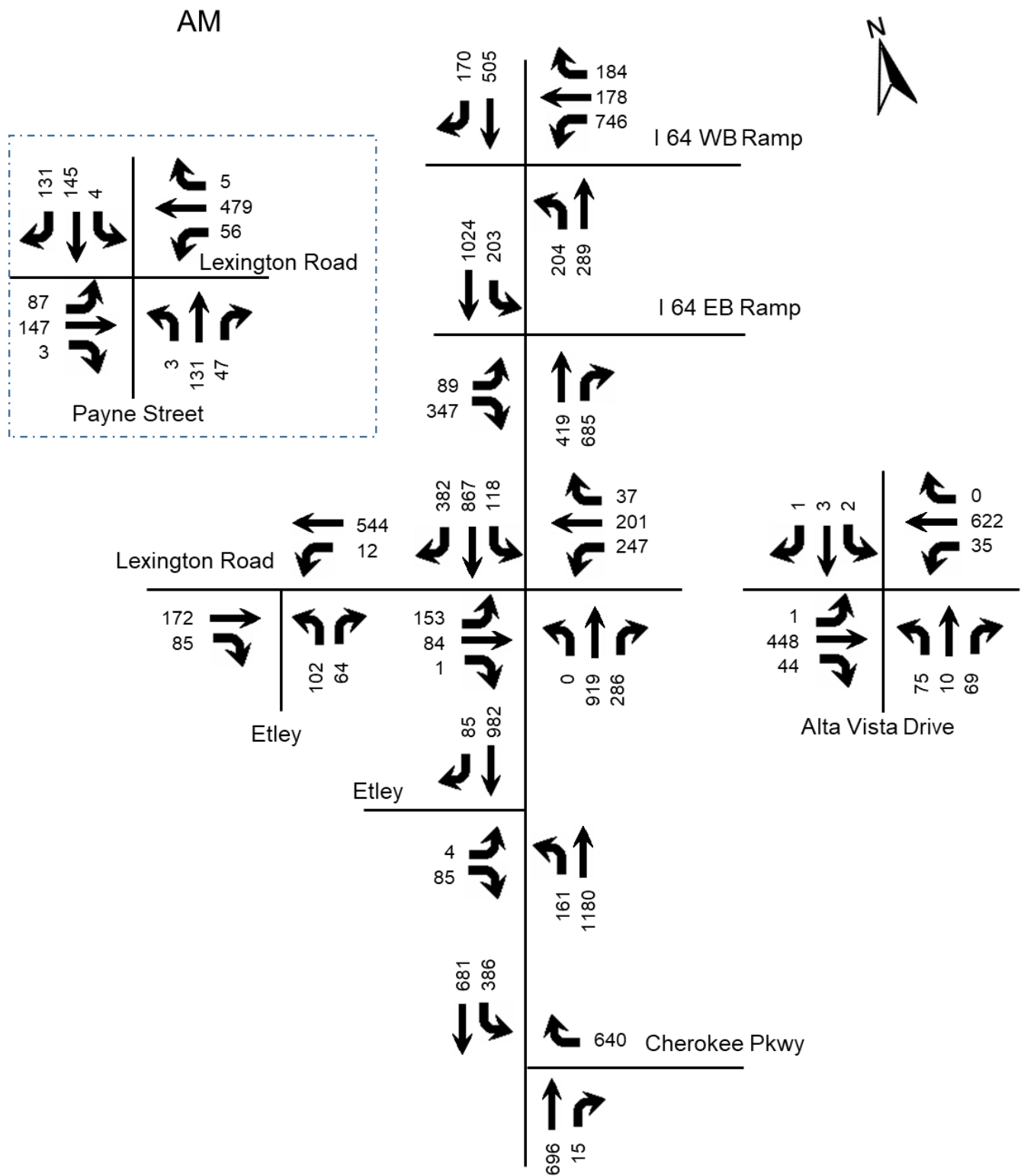


Figure 4. 2026 No Build AM Peak Hour Volumes

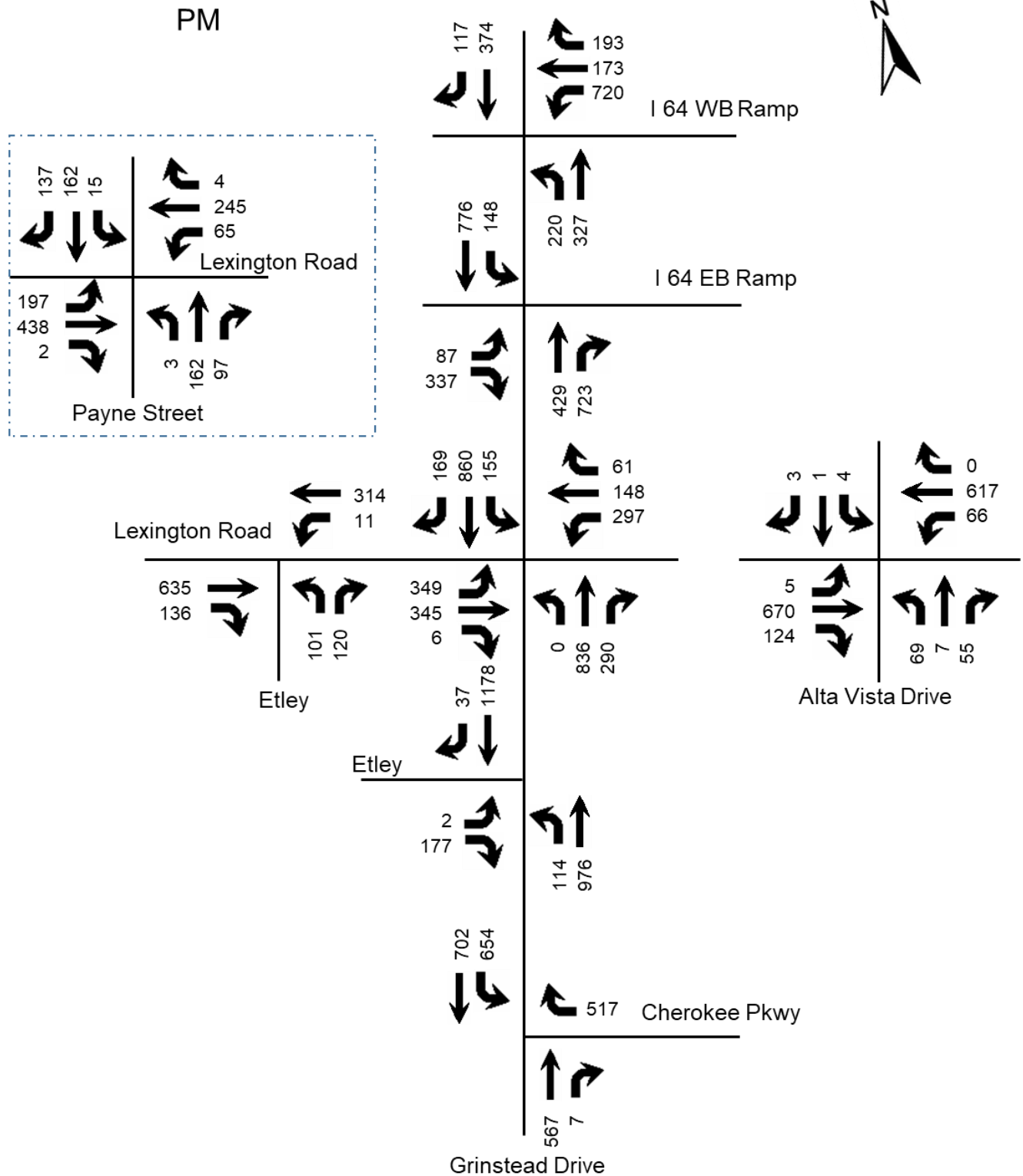


Figure 5. 2026 No Build PM Peak Hour Volumes

TRIP GENERATION

The Institute of Transportation Engineers Trip Generation Manual, 11th Edition contains trip generation rates for a wide range of developments. The results of the trip generation analysis are shown in **Table 1**. The internal capture and pass-by trip procedures outlined in the Trip Generation Handbook, 3rd Edition were applied. The new trips were assigned to the highway network with the percentages shown in **Figure 6**. The pass-by trips were assigned using the existing peak hour distribution. **Figures 7 and 8** show the trips generated by this development and distributed throughout the road network for the year 2026 during the peak hours. The pass-by trips are shown in parenthesis.

Figure 9 and 10 display the individual turning movements for the year 2026 for the peak hours when the development is completed.

Table 1. Peak Hour Trips Generated by Proposed Site

AM Peak Hour

| Land use | ITE Code | Intensity | Total Trips | | | Internal Trips | | | | External Trips | | | Pass-by Trips | | New Trips | | |
|---------------------|----------|------------|-------------|-----|-------|----------------|-----|-------|------|----------------|-----|-------|---------------|--------|-----------|-----|-------|
| | | | In | Out | Total | In | Out | Total | % | In | Out | Total | % | Volume | In | Out | Total |
| Office | 710 | 100,000 sf | 147 | 20 | 167 | 7 | 6 | 13 | 7.8% | 140 | 14 | 154 | 0% | 0 | 140 | 14 | 154 |
| Grocery | 850 | 52,000 sf | 88 | 61 | 149 | 7 | 6 | 13 | 8.7% | 81 | 55 | 136 | 0% | 0 | 81 | 55 | 136 |
| Strip Retail | 822 | 9,719 sf | 17 | 11 | 28 | 0 | 0 | 0 | 0.0% | 17 | 11 | 28 | 0% | 0 | 17 | 11 | 28 |
| Multi-Family (4-10) | 221 | 205 units | 18 | 61 | 79 | 0 | 2 | 2 | 2.5% | 18 | 59 | 77 | 0% | 0 | 18 | 59 | 77 |
| Total | | | 270 | 153 | 423 | 14 | 14 | 28 | 6.6% | 256 | 139 | 395 | 0.0% | 0 | 256 | 139 | 395 |

PM Peak Hour

| Land use | ITE Code | Intensity | Total Trips | | | Internal Trips | | | | External Trips | | | Pass-by Trips | | New Trips | | |
|---------------------|----------|------------|-------------|-----|-------|----------------|-----|-------|-------|----------------|-----|-------|---------------|--------|-----------|-----|-------|
| | | | In | Out | Total | In | Out | Total | % | In | Out | Total | % | Volume | In | Out | Total |
| Office | 710 | 100,000 sf | 28 | 138 | 166 | 6 | 23 | 29 | 17.5% | 22 | 115 | 137 | 0% | 0 | 22 | 115 | 137 |
| Grocery | 850 | 52,000 sf | 228 | 227 | 455 | 34 | 28 | 62 | 13.6% | 194 | 199 | 393 | 24% | 94 | 147 | 151 | 299 |
| Strip Retail | 822 | 9,719 sf | 38 | 38 | 76 | 0 | 0 | 0 | 0.0% | 38 | 38 | 76 | 0% | 0 | 38 | 38 | 76 |
| Multi-Family (4-10) | 221 | 205 units | 49 | 31 | 80 | 25 | 14 | 39 | 48.8% | 24 | 17 | 41 | 0% | 0 | 24 | 17 | 41 |
| Total | | | 343 | 434 | 777 | 65 | 65 | 130 | 16.7% | 278 | 369 | 647 | 14.6% | 94 | 231 | 321 | 553 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



Figure 6. Trip Distribution Percentages

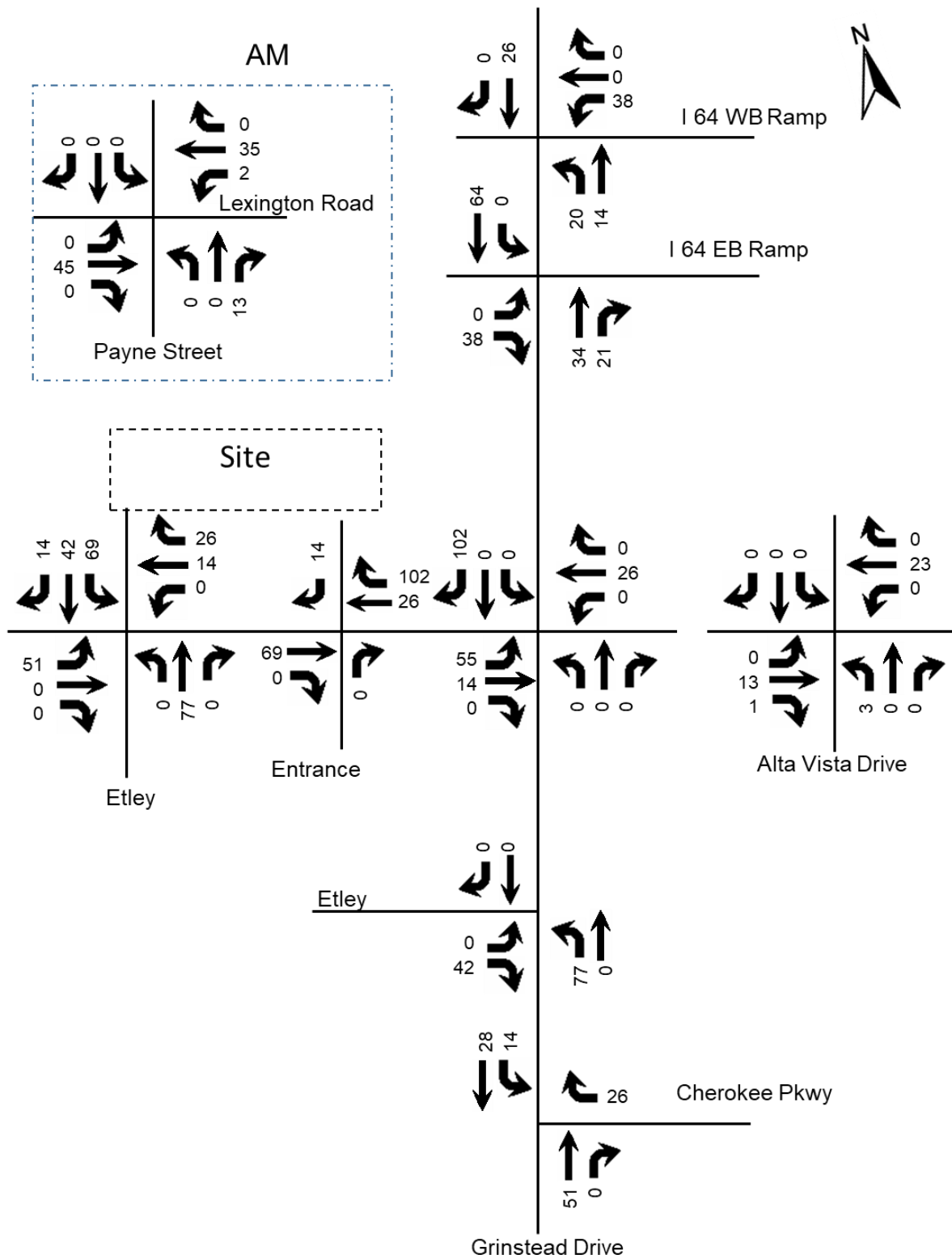


Figure 7. AM Peak Hour Trips Generated by Site

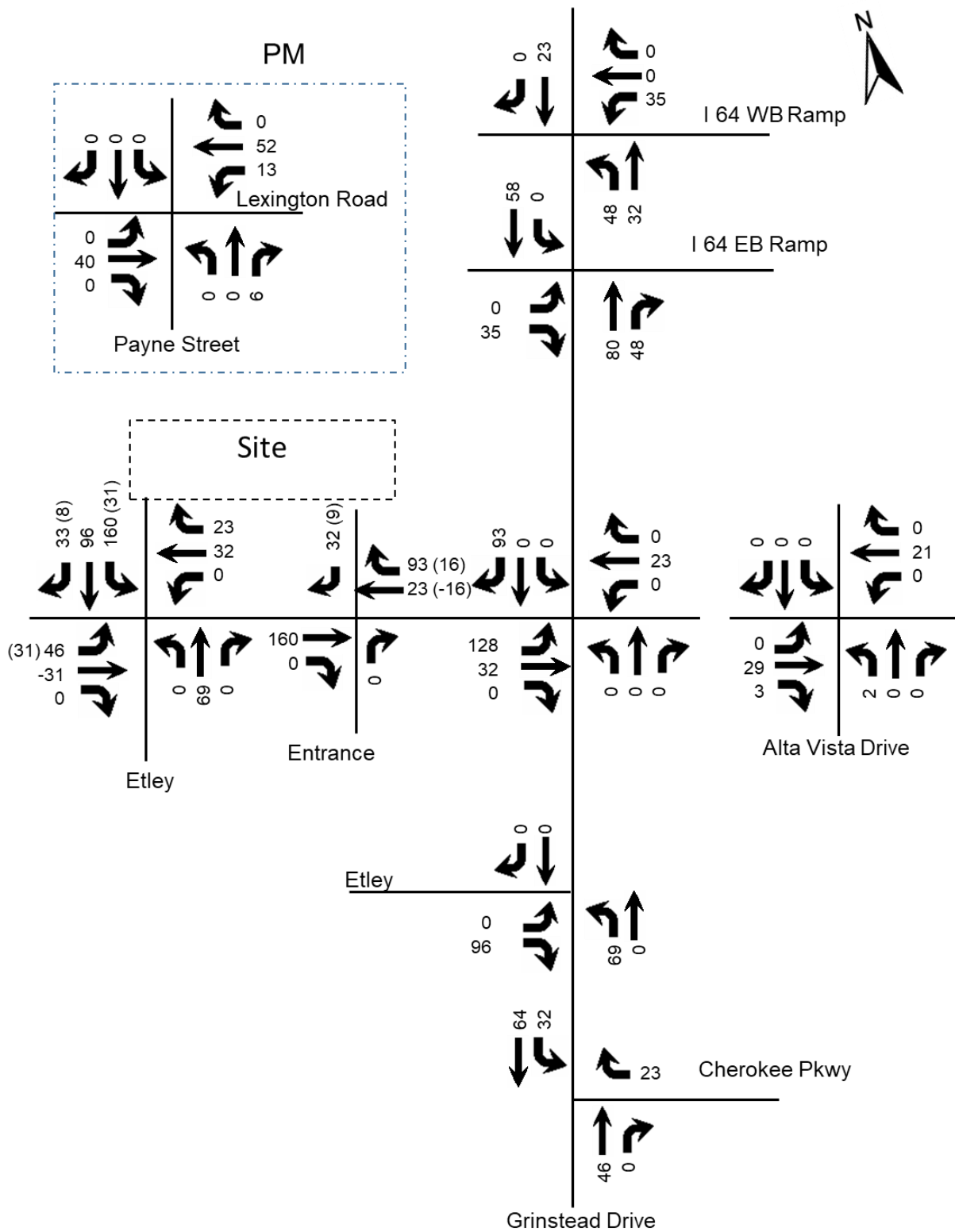


Figure 8. PM Peak Hour Trips Generated by Site

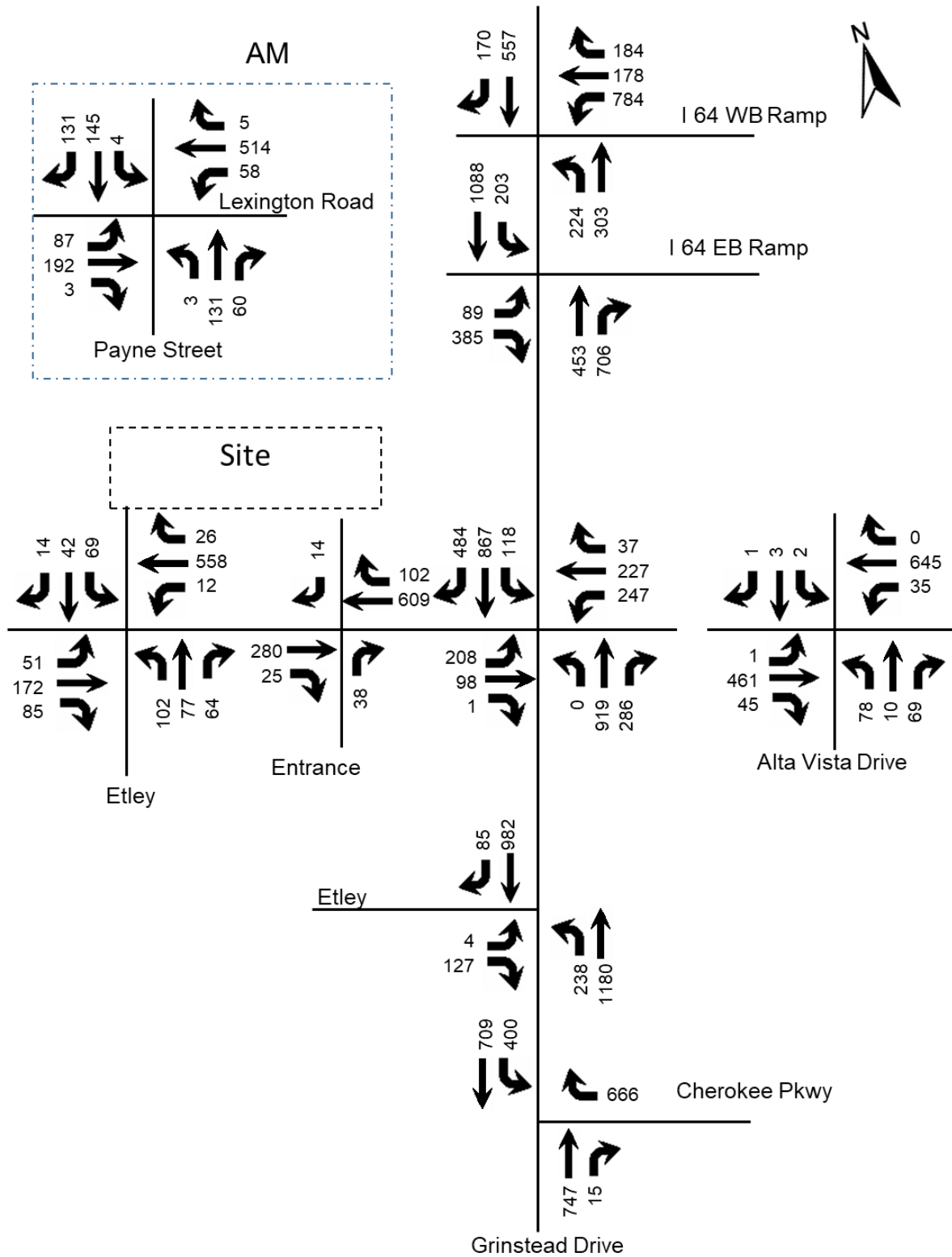


Figure 9. 2026 AM Peak Hour Build

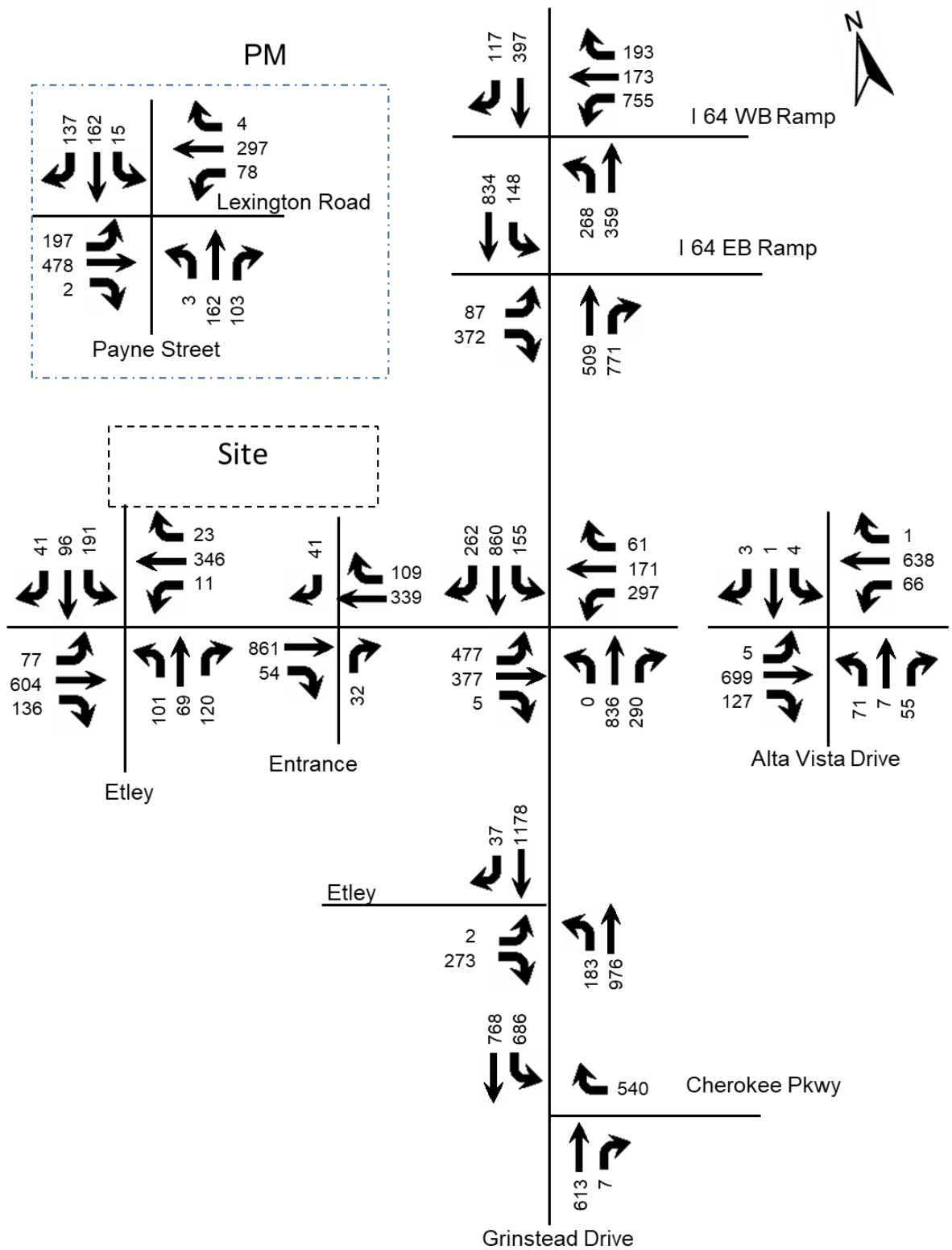


Figure 10. 2026 PM Peak Hour Build

ANALYSIS

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a “Level of Service”. Level of Service is a ranking scale from A through F, “A” is the best operating condition and “F” is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the Highway Capacity Manual, 6th edition. Future Level of Service and delays were determined for the intersections using Synchro (version 11.1.2.9) traffic analysis software. The Level of Service and seconds of delay and are summarized in **Table 2**.

Table 2. Peak Hour Level of Service

| Approach | A.M. | | | P.M. | | |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | 2022 Existing | 2026 No Build | 2026 Build | 2021 Existing | 2026 No Build | 2026 Build |
| Grinstead Drive at I 64 Westbound | C 31.0 | D 41.6 | D 51.2 | C 32.0 | C 31.0 | C 32.3 |
| I 64 ramp Westbound | C 33.0 | D 48.7 | E 61.1 | D 40.4 | D 36.7 | D 36.3 |
| Grinstead Drive Northbound | C 27.6 | D 35.3 | D 48.4 | B 10.8 | B 14.1 | B 18.9 |
| Grinstead Drive Southbound | C 29.8 | C 32.0 | C 33.6 | D 35.5 | D 39.5 | D 41.9 |
| Grinstead Drive at I 64 Eastbound | A 5.0 | A 4.9 | A 7.0 | A 4.9 | A 5.7 | A 5.5 |
| I 64 ramp Eastbound | D 49.7 | D 49.3 | D 49.3 | F 80.8 | E 75.5 | E 75.5 |
| Grinstead Drive Northbound | A 6.9 | A 7.2 | A 7.2 | A 0.1 | A 4.7 | A 4.8 |
| Grinstead Drive Southbound | A 0.9 | A 0.9 | A 3.9 | A 0.5 | A 0.6 | A 0.6 |
| Grinstead Drive at Lexington Road | C 27.8 | D 38.1 | D 45.1 | D 51.2 | D 36.4 | D 46.0 |
| Lexington Road Eastbound | D 38.1 | D 43.2 | E 65.3 | E 60.0 | E 59.0 | E 63.2 |
| Lexington Road Westbound | C 30.8 | C 32.9 | D 37.0 | E 73.1 | E 71.0 | E 76.0 |
| Grinstead Drive Northbound | C 29.4 | D 43.2 | D 40.8 | C 26.1 | C 32.2 | D 39.3 |
| Grinstead Drive Southbound | C 23.9 | C 34.5 | D 47.2 | E 61.4 | B 12.3 | C 28.0 |

One Park North
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| Approach | A.M. | | | P.M. | | |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | 2022 Existing | 2026 No Build | 2026 Build | 2021 Existing | 2026 No Build | 2026 Build |
| Grinstead Drive at Etley Avenue | | | | | | |
| Etley Avenue Eastbound | D 27.2 | C 17.3 | C 18.9 | B 13.1 | C 20.3 | E 35.8 |
| Grinstead Drive Northbound (left) | B 11.4 | C 15.3 | F 79.2 | A 9.2 | B 12.8 | B 14.8 |
| Grinstead Drive at Cherokee Parkway | C 25.8 | C 25.1 | C 26.2 | B 11.6 | B 13.1 | B 14.0 |
| Cherokee Parkway Westbound | E 77.5 | E 72.5 | E 75.1 | C 29.8 | C 33.6 | D 36.5 |
| Grinstead Drive Northbound | B 10.3 | B 14.8 | B 16.8 | A 6.8 | B 10.3 | B 12.2 |
| Grinstead Drive Southbound (left) | B 11.5 | A 8.7 | A 7.9 | B 13.2 | B 13.0 | B 12.7 |
| Lexington Road at Payne Street | B 15.7 | B 16.6 | B 16.2 | B 17.0 | B 16.2 | B 16.1 |
| Lexington Road Eastbound | A 7.7 | A 9.6 | A 9.3 | B 11.9 | A 9.0 | A 9.6 |
| Lexington Road Westbound | A 7.4 | A 9.7 | A 9.7 | A 9.1 | A 7.8 | A 8.3 |
| Payne Street Northbound | C 28.2 | C 25.5 | C 26.5 | C 28.1 | C 27.4 | C 27.7 |
| Payne Street Southbound | C 31.1 | C 29.5 | C 29.8 | C 30.4 | C 29.6 | C 29.7 |
| Lexington Road at Etley Avenue | | | B 11.7 | | | A 9.4 |
| Lexington Road Eastbound (left) | | | A 4.9 | | | A 8.7 |
| Lexington Road Westbound (left) | A 0 | A 7.8 | A 6.1 | A 9.2 | A 9.4 | A 8.4 |
| Etley Avenue Northbound | B 13.7 | B 13.9 | C 26.4 | C 23.0 | C 16.2 | B 10.2 |
| Etley Avenue Southbound | | | C 26.9 | | | B 11.8 |
| Lexington Road at Alta Vista Drive | A 8.1 | A 8.5 | A 8.8 | A 9.2 | B 10.1 | A 10.7 |
| Lexington Road Eastbound | A 5.9 | A 6.3 | A 6.5 | A 9.2 | B 10.6 | B 11.6 |
| Lexington Road Westbound | A 7.0 | A 7.7 | A 8.1 | A 7.1 | A 7.7 | A 8.1 |
| Alta Vista Drive Northbound | B 18.8 | B 18.9 | B 19.0 | B 18.8 | B 18.5 | B 18.5 |

| Approach | A.M. | | | P.M. | | |
|-----------------------------|---------------|---------------|------------|---------------|---------------|------------|
| | 2022 Existing | 2026 No Build | 2026 Build | 2021 Existing | 2026 No Build | 2026 Build |
| Alta Vista Drive Southbound | B 16.6 | B 16.6 | B 16.6 | B 17.3 | B 16.8 | B 16.8 |

Key: Level of Service, Delay in seconds per vehicle

Improvements that are included in the results which are required with One Park are dual left turn lanes from Lexington Road in the existing median. At the Etley Avenue intersection with Lexington Road, the northbound approach will have a left and right turn lane. At the Etley Avenue intersection with Grinstead Drive, the southbound approach will have a left and a right turn lane. The intersection of Grinstead Drive at Etley Avenue will require a dedicated left turn lane.

As a result of the One Park North, a traffic signal at the Lexington Road intersection at Etley Avenue will be installed. The exit volume from One Park North do meet the signal warrants. The detailed hourly exit volumes are shown in the appendix (page 26). Left turn lanes on Lexington Road will be provided at the intersection with Etley Avenue.

PEDESTRIANS

The development will be surrounded by eight-foot sidewalks. Crosswalks adjacent to the site will be striped with the ladder style, which improve visibility of the crosswalk to drivers.

CONCLUSIONS

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2026, there will be an impact to the existing highway network. To mitigate the impacts the following improvements will be completed with the development – a traffic signal at the intersection of Etley Avenue at Lexington Road, with left turn lanes on Lexington Road.

APPENDIX

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study

Traffic Counts

Classified Turn Movement Count || All vehicles



Jefferson County, KY

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Site 3 of 8

Grinstead Dr (South)
Grinstead Dr (North)
I-64 W/Bound On-Ramp
I-64 W/Bound Off-Ramp

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.247818°, -85.700115°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | Westbound | | | | |
|----------------|----------------------|-------------|---------------|--------------|----------------------|--------------|---------------|--------------|----------------------|--|-----------------------|-------------|--------------|--------------|--------------|
| | Grinstead Dr (South) | | | | Grinstead Dr (North) | | | | I-64 W/Bound On-Ramp | | I-64 W/Bound Off-Ramp | | | | |
| | Left 3.1 | Thru 3.2 | U-Turn 3.3 | App Total | Thru 3.4 | Right 3.5 | U-Turn 3.6 | App Total | | | Left 3.7 | Thru 3.8 | Right 3.9 | App Total | Int Total |
| 0700 - 0715 | 18 | 49 | 0 | 67 | 83 | 34 | 0 | 117 | | | 110 | 29 | 66 | 205 | 389 |
| 0715 - 0730 | 29 | 61 | 0 | 90 | 107 | 48 | 0 | 155 | | | 141 | 29 | 61 | 231 | 476 |
| 0730 - 0745 | 44 | 72 | 0 | 116 | 135 | 56 | 0 | 191 | | | 208 | 40 | 49 | 297 | 604 |
| 0745 - 0800 | 45 | 64 | 0 | 109 | 133 | 34 | 0 | 167 | | | 164 | 65 | 39 | 268 | 544 |
| Hourly Total | 136 | 246 | 0 | 382 | 458 | 172 | 0 | 630 | | | 623 | 163 | 215 | 1001 | 2013 |
| 0800 - 0815 | 52 | 63 | 0 | 115 | 82 | 25 | 0 | 107 | | | 163 | 37 | 28 | 228 | 450 |
| 0815 - 0830 | 43 | 65 | 0 | 108 | 72 | 33 | 0 | 105 | | | 150 | 56 | 45 | 251 | 464 |
| 0830 - 0845 | 49 | 47 | 0 | 96 | 77 | 27 | 0 | 104 | | | 127 | 34 | 28 | 189 | 389 |
| 0845 - 0900 | 45 | 63 | 0 | 108 | 53 | 31 | 0 | 84 | | | 121 | 43 | 43 | 207 | 399 |
| Hourly Total | 189 | 238 | 0 | 427 | 284 | 116 | 0 | 400 | | | 561 | 170 | 144 | 875 | 1702 |
| Grand Total | 325 | 484 | 0 | 809 | 742 | 288 | 0 | 1030 | | | 1184 | 333 | 359 | 1876 | 3715 |
| Approach % | 40.17 | 59.83 | 0.00 | - | 72.04 | 27.96 | 0.00 | - | | | 63.11 | 17.75 | 19.14 | - | - |
| Intersection % | 8.75 | 13.03 | 0.00 | 21.78 | 19.97 | 7.75 | 0.00 | 27.73 | | | 31.87 | 8.96 | 9.66 | 50.50 | - |
| PHF | 0.82 | 0.90 | 0.00 | 0.93 | 0.85 | 0.73 | 0.00 | 0.81 | | | 0.81 | 0.66 | 0.73 | 0.86 | 0.86 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | Westbound | | | | |
|----------------|----------------------|-------------|---------------|--------------|----------------------|--------------|---------------|--------------|----------------------|--|-----------------------|-------------|--------------|--------------|--------------|
| | Grinstead Dr (South) | | | | Grinstead Dr (North) | | | | I-64 W/Bound On-Ramp | | I-64 W/Bound Off-Ramp | | | | |
| | Left 3.1 | Thru 3.2 | U-Turn 3.3 | App Total | Thru 3.4 | Right 3.5 | U-Turn 3.6 | App Total | | | Left 3.7 | Thru 3.8 | Right 3.9 | App Total | Int Total |
| 1600 - 1615 | 41 | 77 | 0 | 118 | 108 | 17 | 0 | 125 | | | 110 | 24 | 32 | 166 | 409 |
| 1615 - 1630 | 40 | 72 | 0 | 112 | 90 | 19 | 0 | 109 | | | 137 | 34 | 25 | 196 | 417 |
| 1630 - 1645 | 75 | 75 | 0 | 150 | 80 | 31 | 0 | 111 | | | 125 | 33 | 50 | 208 | 469 |
| 1645 - 1700 | 41 | 78 | 0 | 119 | 95 | 31 | 0 | 126 | | | 142 | 37 | 38 | 217 | 462 |
| Hourly Total | 197 | 302 | 0 | 499 | 373 | 98 | 0 | 471 | | | 514 | 128 | 145 | 787 | 1757 |
| 1700 - 1715 | 38 | 78 | 0 | 116 | 95 | 29 | 0 | 124 | | | 171 | 46 | 47 | 264 | 504 |
| 1715 - 1730 | 49 | 71 | 0 | 120 | 70 | 24 | 0 | 94 | | | 181 | 50 | 55 | 286 | 500 |
| 1730 - 1745 | 34 | 75 | 0 | 109 | 93 | 28 | 0 | 121 | | | 189 | 33 | 45 | 267 | 497 |
| 1745 - 1800 | 44 | 79 | 0 | 123 | 77 | 15 | 0 | 92 | | | 156 | 33 | 51 | 240 | 455 |
| Hourly Total | 165 | 303 | 0 | 468 | 335 | 96 | 0 | 431 | | | 697 | 162 | 198 | 1057 | 1956 |
| Grand Total | 362 | 605 | 0 | 967 | 708 | 194 | 0 | 902 | | | 1211 | 290 | 343 | 1844 | 3713 |
| Approach % | 37.44 | 62.56 | 0.00 | - | 78.49 | 21.51 | 0.00 | - | | | 65.67 | 15.73 | 18.60 | - | - |
| Intersection % | 9.75 | 16.29 | 0.00 | 26.04 | 19.07 | 5.22 | 0.00 | 24.29 | | | 32.62 | 7.81 | 9.24 | 49.66 | - |
| PHF | 0.83 | 0.97 | 0.00 | 0.97 | 0.93 | 0.90 | 0.00 | 0.92 | | | 0.90 | 0.83 | 0.84 | 0.90 | 0.97 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 2 of 8

Grinstead Dr (South)
Grinstead Dr (North)
I-64 E/Bound Off-Ramp
I-64 E/Bound On-Ramp

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.246730°, -85.700776°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | Int Total |
|----------------|----------------------|-------|--------|-----------|----------------------|-------|--------|-----------|-----------------------|------|-------|-----------|----------------------|------|-----------|
| | Grinstead Dr (South) | | | | Grinstead Dr (North) | | | | I-64 E/Bound Off-Ramp | | | | I-64 E/Bound On-Ramp | | |
| | Thru | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Left | Thru | Right | App Total | | | |
| 0700 - 0715 | 36 | 79 | 0 | 115 | 55 | 135 | 0 | 190 | 31 | 0 | 47 | 78 | | 383 | |
| 0715 - 0730 | 57 | 94 | 0 | 151 | 71 | 177 | 0 | 248 | 34 | 0 | 67 | 101 | | 500 | |
| 0730 - 0745 | 93 | 184 | 0 | 277 | 72 | 273 | 0 | 345 | 24 | 0 | 81 | 105 | | 727 | |
| 0745 - 0800 | 86 | 161 | 0 | 247 | 50 | 245 | 0 | 295 | 21 | 0 | 85 | 106 | | 648 | |
| Hourly Total | 272 | 518 | 0 | 790 | 248 | 830 | 0 | 1078 | 110 | 0 | 280 | 390 | | 2258 | |
| 0800 - 0815 | 93 | 152 | 0 | 245 | 38 | 208 | 0 | 246 | 23 | 0 | 80 | 103 | | 594 | |
| 0815 - 0830 | 87 | 135 | 0 | 222 | 35 | 189 | 0 | 224 | 18 | 0 | 46 | 64 | | 510 | |
| 0830 - 0845 | 75 | 130 | 0 | 205 | 34 | 170 | 0 | 204 | 21 | 0 | 76 | 97 | | 506 | |
| 0845 - 0900 | 85 | 113 | 0 | 198 | 21 | 155 | 0 | 176 | 24 | 1 | 60 | 85 | | 459 | |
| Hourly Total | 340 | 530 | 0 | 870 | 128 | 722 | 0 | 850 | 86 | 1 | 262 | 349 | | 2069 | |
| Grand Total | 612 | 1048 | 0 | 1660 | 376 | 1552 | 0 | 1928 | 196 | 1 | 542 | 739 | | 4327 | |
| Approach % | 36.87 | 63.13 | 0.00 | - | 19.50 | 80.50 | 0.00 | - | 26.52 | 0.14 | 73.34 | - | | | |
| Intersection % | 14.14 | 24.22 | 0.00 | 38.36 | 8.69 | 35.87 | 0.00 | 44.56 | 4.53 | 0.02 | 12.53 | 17.08 | | | |
| PHF | 0.97 | 0.86 | 0.00 | 0.89 | 0.68 | 0.84 | 0.00 | 0.80 | 0.90 | 0.00 | 0.86 | 0.89 | | 0.85 | |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | Int Total |
|----------------|----------------------|-------|--------|-----------|----------------------|-------|--------|-----------|-----------------------|------|-------|-----------|----------------------|------|-----------|
| | Grinstead Dr (South) | | | | Grinstead Dr (North) | | | | I-64 E/Bound Off-Ramp | | | | I-64 E/Bound On-Ramp | | |
| | Thru | Right | U-Turn | App Total | Left | Thru | U-Turn | App Total | Left | Thru | Right | App Total | | | |
| 1600 - 1615 | 103 | 171 | 0 | 274 | 39 | 179 | 0 | 218 | 17 | 0 | 86 | 103 | | 595 | |
| 1615 - 1630 | 86 | 142 | 0 | 228 | 33 | 192 | 0 | 225 | 25 | 2 | 79 | 106 | | 559 | |
| 1630 - 1645 | 130 | 174 | 0 | 304 | 36 | 169 | 0 | 205 | 19 | 0 | 69 | 88 | | 597 | |
| 1645 - 1700 | 102 | 194 | 0 | 296 | 33 | 204 | 0 | 237 | 18 | 0 | 89 | 107 | | 640 | |
| Hourly Total | 421 | 681 | 0 | 1102 | 141 | 744 | 0 | 885 | 79 | 2 | 323 | 404 | | 2391 | |
| 1700 - 1715 | 88 | 187 | 0 | 275 | 42 | 226 | 0 | 268 | 26 | 0 | 72 | 98 | | 641 | |
| 1715 - 1730 | 99 | 160 | 1 | 260 | 33 | 216 | 0 | 249 | 19 | 0 | 70 | 89 | | 598 | |
| 1730 - 1745 | 90 | 134 | 0 | 224 | 34 | 249 | 0 | 283 | 21 | 0 | 84 | 105 | | 612 | |
| 1745 - 1800 | 100 | 115 | 0 | 215 | 28 | 204 | 0 | 232 | 25 | 0 | 88 | 113 | | 560 | |
| Hourly Total | 377 | 596 | 1 | 974 | 137 | 895 | 0 | 1032 | 91 | 0 | 314 | 405 | | 2411 | |
| Grand Total | 798 | 1277 | 1 | 2076 | 278 | 1639 | 0 | 1917 | 170 | 2 | 637 | 809 | | 4802 | |
| Approach % | 38.44 | 61.51 | 0.05 | - | 14.50 | 85.50 | 0.00 | - | 21.01 | 0.25 | 78.74 | - | | | |
| Intersection % | 16.62 | 26.59 | 0.02 | 43.23 | 5.79 | 34.13 | 0.00 | 39.92 | 3.54 | 0.04 | 13.27 | 16.85 | | | |
| PHF | 0.93 | 0.87 | 0.25 | 0.89 | 0.85 | 0.90 | 0.00 | 0.92 | 0.81 | 0.00 | 0.88 | 0.93 | | 0.97 | |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 1 of 8

US-60 ALT Grinstead Dr (South)
US-60 ALT Grinstead Dr (North)
Lexington Rd
US-60 ALT Lexington Rd

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.245551°, -85.701593°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Int Total |
|----------------|--------------------------------|----------|-----------|------------|-----------|--------------------------------|----------|-----------|------------|-----------|--------------|-----------|------------|-------------|-----------|------------------------|-----------|------------|-------------|-----------|-----------|
| | US-60 ALT Grinstead Dr (South) | | | | | US-60 ALT Grinstead Dr (North) | | | | | Lexington Rd | | | | | US-60 ALT Lexington Rd | | | | | |
| | Left 1.1 | Thru 1.2 | Right 1.3 | U-Turn 1.4 | App Total | Left 1.5 | Thru 1.6 | Right 1.7 | U-Turn 1.8 | App Total | Left 1.9 | Thru 1.10 | Right 1.11 | U-Turn 1.12 | App Total | Left 1.13 | Thru 1.14 | Right 1.15 | U-Turn 1.16 | App Total | |
| 0700 - 0715 | 0 | 105 | 31 | 0 | 136 | 19 | 114 | 51 | 0 | 184 | 9 | 16 | 1 | 0 | 26 | 26 | 22 | 3 | 0 | 51 | 397 |
| 0715 - 0730 | 0 | 128 | 58 | 0 | 186 | 20 | 150 | 72 | 0 | 242 | 14 | 14 | 0 | 0 | 28 | 51 | 48 | 7 | 0 | 106 | 562 |
| 0730 - 0745 | 0 | 252 | 64 | 0 | 316 | 30 | 223 | 99 | 0 | 352 | 15 | 18 | 0 | 0 | 33 | 52 | 50 | 10 | 0 | 112 | 813 |
| 0745 - 0800 | 0 | 217 | 66 | 0 | 283 | 35 | 213 | 84 | 0 | 332 | 27 | 19 | 1 | 0 | 47 | 71 | 51 | 5 | 0 | 127 | 789 |
| Hourly Total | 0 | 702 | 219 | 0 | 921 | 104 | 700 | 306 | 0 | 1110 | 65 | 67 | 2 | 0 | 134 | 200 | 171 | 25 | 0 | 396 | 2561 |
| 0800 - 0815 | 0 | 218 | 82 | 0 | 300 | 25 | 168 | 89 | 0 | 282 | 16 | 10 | 0 | 0 | 26 | 43 | 36 | 12 | 0 | 91 | 699 |
| 0815 - 0830 | 0 | 196 | 63 | 0 | 259 | 23 | 130 | 84 | 0 | 237 | 20 | 16 | 0 | 0 | 36 | 43 | 58 | 9 | 0 | 110 | 642 |
| 0830 - 0845 | 0 | 161 | 49 | 0 | 210 | 24 | 157 | 66 | 0 | 247 | 33 | 25 | 0 | 0 | 58 | 53 | 69 | 8 | 0 | 130 | 645 |
| 0845 - 0900 | 0 | 171 | 64 | 0 | 235 | 26 | 129 | 61 | 0 | 216 | 20 | 19 | 3 | 0 | 42 | 46 | 50 | 5 | 0 | 101 | 594 |
| Hourly Total | 0 | 746 | 258 | 0 | 1004 | 98 | 584 | 300 | 0 | 982 | 89 | 70 | 3 | 0 | 162 | 185 | 213 | 34 | 0 | 432 | 2580 |
| Grand Total | 0 | 1448 | 477 | 0 | 1925 | 202 | 1284 | 606 | 0 | 2092 | 154 | 137 | 5 | 0 | 296 | 385 | 384 | 59 | 0 | 828 | 5141 |
| Approach % | 0.00 | 75.22 | 24.78 | 0.00 | - | 9.66 | 61.38 | 28.97 | 0.00 | - | 52.03 | 46.28 | 1.69 | 0.00 | - | 46.50 | 46.38 | 7.13 | 0.00 | - | |
| Intersection % | 0.00 | 28.17 | 9.28 | 0.00 | 37.44 | 3.93 | 24.98 | 11.79 | 0.00 | 40.69 | 3.00 | 2.66 | 0.10 | 0.00 | 5.76 | 7.49 | 7.47 | 1.15 | 0.00 | 16.11 | |
| PHF | 0.00 | 0.88 | 0.84 | 0.00 | 0.92 | 0.81 | 0.82 | 0.90 | 0.00 | 0.85 | 0.72 | 0.83 | 0.25 | 0.00 | 0.76 | 0.74 | 0.84 | 0.75 | 0.00 | 0.87 | 0.90 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Int Total |
|----------------|--------------------------------|----------|-----------|------------|-----------|--------------------------------|----------|-----------|------------|-----------|--------------|-----------|------------|-------------|-----------|------------------------|-----------|------------|-------------|-----------|-----------|
| | US-60 ALT Grinstead Dr (South) | | | | | US-60 ALT Grinstead Dr (North) | | | | | Lexington Rd | | | | | US-60 ALT Lexington Rd | | | | | |
| | Left 1.1 | Thru 1.2 | Right 1.3 | U-Turn 1.4 | App Total | Left 1.5 | Thru 1.6 | Right 1.7 | U-Turn 1.8 | App Total | Left 1.9 | Thru 1.10 | Right 1.11 | U-Turn 1.12 | App Total | Left 1.13 | Thru 1.14 | Right 1.15 | U-Turn 1.16 | App Total | |
| 1600 - 1615 | 0 | 217 | 73 | 0 | 290 | 41 | 183 | 41 | 0 | 265 | 45 | 47 | 2 | 0 | 94 | 58 | 35 | 14 | 0 | 107 | 756 |
| 1615 - 1630 | 0 | 169 | 63 | 0 | 232 | 46 | 192 | 33 | 0 | 271 | 39 | 65 | 1 | 0 | 105 | 78 | 33 | 20 | 0 | 131 | 739 |
| 1630 - 1645 | 0 | 238 | 73 | 0 | 311 | 35 | 176 | 30 | 0 | 241 | 52 | 58 | 4 | 0 | 114 | 84 | 38 | 18 | 0 | 140 | 806 |
| 1645 - 1700 | 0 | 207 | 68 | 0 | 275 | 34 | 226 | 32 | 0 | 292 | 76 | 83 | 0 | 0 | 159 | 52 | 23 | 15 | 0 | 90 | 816 |
| Hourly Total | 0 | 831 | 277 | 0 | 1108 | 156 | 777 | 136 | 0 | 1069 | 212 | 253 | 7 | 0 | 472 | 272 | 129 | 67 | 0 | 468 | 3117 |
| 1700 - 1715 | 0 | 165 | 64 | 0 | 229 | 32 | 223 | 39 | 0 | 294 | 91 | 79 | 2 | 0 | 172 | 65 | 42 | 15 | 0 | 122 | 817 |
| 1715 - 1730 | 0 | 194 | 74 | 0 | 268 | 48 | 180 | 59 | 0 | 287 | 53 | 86 | 1 | 0 | 140 | 78 | 41 | 11 | 0 | 130 | 825 |
| 1730 - 1745 | 0 | 160 | 63 | 0 | 223 | 46 | 224 | 65 | 0 | 335 | 55 | 82 | 0 | 0 | 137 | 65 | 30 | 11 | 0 | 106 | 801 |
| 1745 - 1800 | 0 | 168 | 73 | 0 | 241 | 28 | 207 | 59 | 0 | 294 | 37 | 65 | 1 | 0 | 103 | 82 | 47 | 8 | 0 | 137 | 775 |
| Hourly Total | 0 | 687 | 274 | 0 | 961 | 154 | 834 | 222 | 0 | 1210 | 236 | 312 | 4 | 0 | 552 | 290 | 160 | 45 | 0 | 495 | 3218 |
| Grand Total | 0 | 1518 | 551 | 0 | 2069 | 310 | 1611 | 358 | 0 | 2279 | 448 | 565 | 11 | 0 | 1024 | 562 | 289 | 112 | 0 | 963 | 6335 |
| Approach % | 0.00 | 73.37 | 26.63 | 0.00 | - | 13.60 | 70.69 | 15.71 | 0.00 | - | 43.75 | 55.18 | 1.07 | 0.00 | - | 58.36 | 30.01 | 11.63 | 0.00 | - | |
| Intersection % | 0.00 | 23.96 | 8.70 | 0.00 | 32.66 | 4.89 | 25.43 | 5.65 | 0.00 | 35.97 | 7.07 | 8.92 | 0.17 | 0.00 | 16.16 | 8.87 | 4.56 | 1.77 | 0.00 | 15.20 | |
| PHF | 0.00 | 0.84 | 0.94 | 0.00 | 0.87 | 0.78 | 0.89 | 0.68 | 0.00 | 0.95 | 0.75 | 0.89 | 0.44 | 0.00 | 0.85 | 0.83 | 0.86 | 0.82 | 0.00 | 0.86 | 0.99 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 7 of 8

Etley Ave
US-60 ALT Grinstead Dr (West)
US-60 ALT Grinstead Dr (East)

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.244061°, -85.704245°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | | |
|----------------|-------------|--------------|---------------|--------------|-------------------------------|-------------|---------------|--------------|-------------------------------|--------------|---------------|--------------|--------------|
| | Etley Ave | | | | US-60 ALT Grinstead Dr (West) | | | | US-60 ALT Grinstead Dr (East) | | | | |
| | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total | Left 7.4 | Thru 7.5 | U-Turn 7.6 | App Total | Thru 7.7 | Right 7.8 | U-Turn 7.9 | App Total | Int Total |
| 0700 - 0715 | 1 | 18 | 0 | 19 | 7 | 134 | 0 | 141 | 145 | 0 | 0 | 145 | 305 |
| 0715 - 0730 | 0 | 8 | 0 | 8 | 12 | 192 | 0 | 204 | 189 | 1 | 0 | 190 | 402 |
| 0730 - 0745 | 1 | 14 | 0 | 15 | 10 | 312 | 0 | 322 | 277 | 6 | 0 | 283 | 620 |
| 0745 - 0800 | 0 | 14 | 0 | 14 | 22 | 298 | 0 | 320 | 266 | 3 | 0 | 269 | 603 |
| Hourly Total | 2 | 54 | 0 | 56 | 51 | 936 | 0 | 987 | 877 | 10 | 0 | 887 | 1930 |
| 0800 - 0815 | 1 | 11 | 0 | 12 | 25 | 276 | 0 | 301 | 217 | 3 | 0 | 220 | 533 |
| 0815 - 0830 | 2 | 12 | 0 | 14 | 15 | 248 | 0 | 263 | 162 | 1 | 0 | 163 | 440 |
| 0830 - 0845 | 0 | 16 | 0 | 16 | 17 | 220 | 0 | 237 | 190 | 5 | 0 | 195 | 448 |
| 0845 - 0900 | 1 | 14 | 0 | 15 | 18 | 221 | 0 | 239 | 184 | 5 | 0 | 189 | 443 |
| Hourly Total | 4 | 53 | 0 | 57 | 75 | 965 | 0 | 1040 | 753 | 14 | 0 | 767 | 1864 |
| Grand Total | 6 | 107 | 0 | 113 | 126 | 1901 | 0 | 2027 | 1630 | 24 | 0 | 1654 | 3794 |
| Approach % | 5.31 | 94.69 | 0.00 | - | 6.22 | 93.78 | 0.00 | - | 98.55 | 1.45 | 0.00 | - | - |
| Intersection % | 0.16 | 2.82 | 0.00 | 2.98 | 3.32 | 50.11 | 0.00 | 53.43 | 42.96 | 0.63 | 0.00 | 43.60 | - |
| PHF | 0.50 | 0.91 | 0.00 | 0.92 | 0.72 | 0.91 | 0.00 | 0.94 | 0.83 | 0.54 | 0.00 | 0.83 | 0.89 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Southbound | | | | Eastbound | | | | Westbound | | | | |
|----------------|-------------|--------------|---------------|--------------|-------------------------------|-------------|---------------|--------------|-------------------------------|--------------|---------------|--------------|--------------|
| | Etley Ave | | | | US-60 ALT Grinstead Dr (West) | | | | US-60 ALT Grinstead Dr (East) | | | | |
| | Left 7.1 | Right 7.2 | U-Turn 7.3 | App Total | Left 7.4 | Thru 7.5 | U-Turn 7.6 | App Total | Thru 7.7 | Right 7.8 | U-Turn 7.9 | App Total | Int Total |
| 1600 - 1615 | 1 | 19 | 0 | 20 | 21 | 275 | 0 | 296 | 248 | 4 | 0 | 252 | 568 |
| 1615 - 1630 | 3 | 24 | 0 | 27 | 10 | 243 | 0 | 253 | 277 | 0 | 0 | 277 | 557 |
| 1630 - 1645 | 0 | 19 | 0 | 19 | 17 | 282 | 0 | 299 | 247 | 3 | 1 | 251 | 569 |
| 1645 - 1700 | 1 | 27 | 0 | 28 | 26 | 259 | 0 | 285 | 251 | 3 | 0 | 254 | 567 |
| Hourly Total | 5 | 89 | 0 | 94 | 74 | 1059 | 0 | 1133 | 1023 | 10 | 1 | 1034 | 2261 |
| 1700 - 1715 | 0 | 42 | 0 | 42 | 16 | 259 | 0 | 275 | 266 | 3 | 0 | 269 | 586 |
| 1715 - 1730 | 0 | 43 | 0 | 43 | 17 | 240 | 0 | 257 | 280 | 2 | 0 | 282 | 582 |
| 1730 - 1745 | 1 | 35 | 0 | 36 | 13 | 217 | 0 | 230 | 292 | 5 | 0 | 297 | 563 |
| 1745 - 1800 | 1 | 16 | 0 | 17 | 16 | 251 | 0 | 267 | 293 | 3 | 0 | 296 | 580 |
| Hourly Total | 2 | 136 | 0 | 138 | 62 | 967 | 0 | 1029 | 1131 | 13 | 0 | 1144 | 2311 |
| Grand Total | 7 | 225 | 0 | 232 | 136 | 2026 | 0 | 2162 | 2154 | 23 | 1 | 2178 | 4572 |
| Approach % | 3.02 | 96.98 | 0.00 | - | 6.29 | 93.71 | 0.00 | - | 98.90 | 1.06 | 0.05 | - | - |
| Intersection % | 0.15 | 4.92 | 0.00 | 5.07 | 2.97 | 44.31 | 0.00 | 47.29 | 47.11 | 0.50 | 0.02 | 47.64 | - |
| PHF | 0.50 | 0.79 | 0.00 | 0.80 | 0.91 | 0.93 | 0.00 | 0.94 | 0.97 | 0.65 | 0.00 | 0.96 | 0.99 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 8 of 8

US-60 ALT Cherokee Pkwy

US-60 ALT Grinstead Dr (West)

US-60 ALT Grinstead Dr (East)

Date

Tuesday, April 26, 2022

Lat/Long

38.243255°, -85.705229°

Weather

Fair
53°F

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound US-60 ALT Cherokee Pkwy | | | |
|----------------|---------------------------------------|--------------|---------------|--------------|
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total |
| 0700 - 0715 | 0 | 72 | 0 | 72 |
| 0715 - 0730 | 0 | 105 | 0 | 105 |
| 0730 - 0745 | 0 | 145 | 0 | 145 |
| 0745 - 0800 | 0 | 164 | 0 | 164 |
| Hourly Total | 0 | 486 | 0 | 486 |
| 0800 - 0815 | 0 | 133 | 0 | 133 |
| 0815 - 0830 | 0 | 145 | 0 | 145 |
| 0830 - 0845 | 0 | 133 | 0 | 133 |
| 0845 - 0900 | 0 | 123 | 0 | 123 |
| Hourly Total | 0 | 534 | 0 | 534 |
| Grand Total | 0 | 1020 | 0 | 1020 |
| Approach % | 0.00 | 100.00 | 0.00 | - |
| Intersection % | 0.00 | 26.97 | 0.00 | 26.97 |
| PHF | 0.00 | 0.89 | 0.00 | 0.89 |

| Eastbound US-60 ALT Grinstead Dr (West) | | | | Westbound US-60 ALT Grinstead Dr (East) | | | | |
|--|--------------|---------------|--------------|--|-------------|---------------|--------------|--------------|
| Thru 8.4 | Right 8.5 | U-Turn 8.6 | App Total | Left 8.7 | Thru 8.8 | U-Turn 8.9 | App Total | Int Total |
| 71 | 0 | 0 | 71 | 77 | 88 | 0 | 165 | 308 |
| 97 | 1 | 0 | 98 | 82 | 116 | 0 | 198 | 401 |
| 175 | 2 | 0 | 177 | 121 | 173 | 0 | 294 | 616 |
| 154 | 6 | 0 | 160 | 82 | 197 | 0 | 279 | 603 |
| 497 | 9 | 0 | 506 | 362 | 574 | 0 | 936 | 1928 |
| 166 | 4 | 0 | 170 | 74 | 150 | 0 | 224 | 527 |
| 119 | 2 | 0 | 121 | 77 | 99 | 0 | 176 | 442 |
| 104 | 1 | 0 | 105 | 88 | 117 | 0 | 205 | 443 |
| 119 | 2 | 0 | 121 | 92 | 106 | 0 | 198 | 442 |
| 508 | 9 | 0 | 517 | 331 | 472 | 0 | 803 | 1854 |
| 1005 | 18 | 0 | 1023 | 693 | 1046 | 0 | 1739 | 3782 |
| 98.24 | 1.76 | 0.00 | - | 39.85 | 60.15 | 0.00 | - | - |
| 26.57 | 0.48 | 0.00 | 27.05 | 18.32 | 27.66 | 0.00 | 45.98 | - |
| 0.88 | 0.58 | 0.00 | 0.89 | 0.73 | 0.79 | 0.00 | 0.83 | 0.89 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound US-60 ALT Cherokee Pkwy | | | |
|----------------|---------------------------------------|--------------|---------------|--------------|
| | Left 8.1 | Right 8.2 | U-Turn 8.3 | App Total |
| 1600 - 1615 | 0 | 151 | 0 | 151 |
| 1615 - 1630 | 0 | 119 | 0 | 119 |
| 1630 - 1645 | 0 | 149 | 0 | 149 |
| 1645 - 1700 | 0 | 147 | 0 | 147 |
| Hourly Total | 0 | 566 | 0 | 566 |
| 1700 - 1715 | 0 | 118 | 0 | 118 |
| 1715 - 1730 | 0 | 109 | 0 | 109 |
| 1730 - 1745 | 0 | 129 | 0 | 129 |
| 1745 - 1800 | 0 | 134 | 0 | 134 |
| Hourly Total | 0 | 490 | 0 | 490 |
| Grand Total | 0 | 1056 | 0 | 1056 |
| Approach % | 0.00 | 100.00 | 0.00 | - |
| Intersection % | 0.00 | 23.15 | 0.00 | 23.15 |
| PHF | 0.00 | 0.91 | 0.00 | 0.91 |

| Eastbound US-60 ALT Grinstead Dr (West) | | | | Westbound US-60 ALT Grinstead Dr (East) | | | | |
|--|--------------|---------------|--------------|--|-------------|---------------|--------------|--------------|
| Thru 8.4 | Right 8.5 | U-Turn 8.6 | App Total | Left 8.7 | Thru 8.8 | U-Turn 8.9 | App Total | Int Total |
| 147 | 2 | 0 | 149 | 138 | 131 | 0 | 269 | 569 |
| 135 | 1 | 0 | 136 | 146 | 155 | 0 | 301 | 556 |
| 150 | 2 | 0 | 152 | 125 | 140 | 0 | 265 | 566 |
| 141 | 4 | 0 | 145 | 147 | 132 | 0 | 279 | 571 |
| 573 | 9 | 0 | 582 | 556 | 558 | 0 | 1114 | 2262 |
| 155 | 4 | 0 | 159 | 161 | 145 | 0 | 306 | 583 |
| 146 | 1 | 0 | 147 | 163 | 160 | 0 | 323 | 579 |
| 102 | 2 | 0 | 104 | 162 | 165 | 0 | 327 | 560 |
| 131 | 1 | 0 | 132 | 132 | 179 | 0 | 311 | 577 |
| 534 | 8 | 0 | 542 | 618 | 649 | 0 | 1267 | 2299 |
| 1107 | 17 | 0 | 1124 | 1174 | 1207 | 0 | 2381 | 4561 |
| 98.49 | 1.51 | 0.00 | - | 49.31 | 50.69 | 0.00 | - | - |
| 24.27 | 0.37 | 0.00 | 24.64 | 25.74 | 26.46 | 0.00 | 52.20 | - |
| 0.86 | 0.50 | 0.00 | 0.85 | 0.95 | 0.91 | 0.00 | 0.97 | 0.99 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 5 of 8

Payne St (South)
Payne St (North)
US-60 ALT Lexington Rd (West)
US-60 ALT Lexington Rd (East)

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.250573°, -85.720700°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound Payne St (South) | | | | | Southbound Payne St (North) | | | | | Eastbound US-60 ALT Lexington Rd (West) | | | | | Westbound US-60 ALT Lexington Rd (East) | | | | | Int Total |
|----------------|--------------------------------|-------------|--------------|---------------|--------------|--------------------------------|-------------|--------------|---------------|--------------|--|--------------|---------------|----------------|--------------|--|--------------|---------------|----------------|--------------|--------------|
| | 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 | 1 | 21 | 3 | 0 | 25 | 0 | 24 | 25 | 0 | 49 | 13 | 16 | 1 | 0 | 30 | 2 | 60 | 0 | 0 | |
| 0715 - 0730 | 1 | 21 | 8 | 0 | 30 | 0 | 22 | 32 | 0 | 54 | 16 | 15 | 0 | 0 | 31 | 8 | 89 | 0 | 0 | 97 | 212 |
| 0730 - 0745 | 0 | 25 | 5 | 0 | 30 | 1 | 22 | 35 | 0 | 58 | 29 | 27 | 2 | 0 | 58 | 10 | 119 | 1 | 0 | 130 | 276 |
| 0745 - 0800 | 1 | 38 | 4 | 0 | 43 | 2 | 30 | 32 | 0 | 64 | 19 | 24 | 0 | 0 | 43 | 11 | 112 | 0 | 0 | 123 | 273 |
| Hourly Total | 3 | 105 | 20 | 0 | 128 | 3 | 98 | 124 | 0 | 225 | 77 | 82 | 3 | 0 | 162 | 31 | 380 | 1 | 0 | 412 | 927 |
| 0800 - 0815 | 0 | 26 | 7 | 0 | 33 | 0 | 33 | 23 | 0 | 56 | 21 | 13 | 2 | 0 | 36 | 10 | 91 | 3 | 0 | 104 | 229 |
| 0815 - 0830 | 1 | 31 | 7 | 0 | 39 | 1 | 28 | 42 | 0 | 71 | 19 | 27 | 0 | 0 | 46 | 8 | 112 | 1 | 0 | 121 | 277 |
| 0830 - 0845 | 1 | 32 | 15 | 0 | 48 | 1 | 49 | 30 | 0 | 80 | 25 | 35 | 1 | 0 | 61 | 23 | 114 | 1 | 0 | 138 | 327 |
| 0845 - 0900 | 4 | 23 | 10 | 0 | 37 | 3 | 33 | 33 | 0 | 69 | 12 | 28 | 3 | 0 | 43 | 5 | 79 | 1 | 0 | 85 | 234 |
| Hourly Total | 6 | 112 | 39 | 0 | 157 | 5 | 143 | 128 | 0 | 276 | 77 | 103 | 6 | 0 | 186 | 46 | 396 | 6 | 0 | 448 | 1067 |
| Grand Total | 9 | 217 | 59 | 0 | 285 | 8 | 241 | 252 | 0 | 501 | 154 | 185 | 9 | 0 | 348 | 77 | 776 | 7 | 0 | 860 | 1994 |
| Approach % | 3.16 | 76.14 | 20.70 | 0.00 | - | 1.60 | 48.10 | 50.30 | 0.00 | - | 44.25 | 53.16 | 2.59 | 0.00 | - | 8.95 | 90.23 | 0.81 | 0.00 | - | - |
| Intersection % | 0.45 | 10.88 | 2.96 | 0.00 | 14.29 | 0.40 | 12.09 | 12.64 | 0.00 | 25.13 | 7.72 | 9.28 | 0.45 | 0.00 | 17.45 | 3.86 | 38.92 | 0.35 | 0.00 | 43.13 | - |
| PHF | 0.75 | 0.84 | 0.55 | 0.00 | 0.85 | 0.50 | 0.71 | 0.76 | 0.00 | 0.85 | 0.84 | 0.71 | 0.38 | 0.00 | 0.76 | 0.57 | 0.94 | 0.42 | 0.00 | 0.88 | 0.85 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound Payne St (South) | | | | | Southbound Payne St (North) | | | | | Eastbound US-60 ALT Lexington Rd (West) | | | | | Westbound US-60 ALT Lexington Rd (East) | | | | | Int Total |
|----------------|--------------------------------|-------------|--------------|---------------|--------------|--------------------------------|-------------|--------------|---------------|--------------|--|--------------|---------------|----------------|--------------|--|--------------|---------------|----------------|--------------|--------------|
| | 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 | 2 | 33 | 18 | 0 | 53 | 3 | 36 | 34 | 0 | 73 | 42 | 78 | 0 | 0 | 120 | 20 | 47 | 2 | 0 | |
| 1615 - 1630 | 2 | 37 | 17 | 0 | 56 | 5 | 33 | 25 | 0 | 63 | 39 | 78 | 0 | 0 | 117 | 6 | 48 | 4 | 0 | 58 | 294 |
| 1630 - 1645 | 0 | 30 | 21 | 0 | 51 | 3 | 33 | 28 | 0 | 64 | 49 | 88 | 1 | 0 | 138 | 10 | 45 | 0 | 0 | 55 | 308 |
| 1645 - 1700 | 1 | 43 | 21 | 0 | 65 | 5 | 48 | 31 | 0 | 84 | 39 | 108 | 2 | 0 | 149 | 15 | 38 | 0 | 0 | 53 | 351 |
| Hourly Total | 5 | 143 | 77 | 0 | 225 | 16 | 150 | 118 | 0 | 284 | 169 | 352 | 3 | 0 | 524 | 51 | 178 | 6 | 0 | 235 | 1268 |
| 1700 - 1715 | 0 | 37 | 35 | 0 | 72 | 3 | 34 | 40 | 0 | 77 | 51 | 103 | 0 | 0 | 154 | 6 | 47 | 1 | 0 | 54 | 357 |
| 1715 - 1730 | 1 | 41 | 23 | 0 | 65 | 3 | 40 | 37 | 0 | 80 | 59 | 95 | 0 | 0 | 154 | 16 | 67 | 0 | 0 | 83 | 382 |
| 1730 - 1745 | 1 | 35 | 11 | 0 | 47 | 3 | 36 | 25 | 0 | 64 | 40 | 107 | 2 | 0 | 149 | 22 | 65 | 2 | 0 | 89 | 349 |
| 1745 - 1800 | 1 | 34 | 14 | 0 | 49 | 2 | 35 | 20 | 0 | 57 | 38 | 68 | 1 | 0 | 107 | 15 | 57 | 2 | 0 | 74 | 287 |
| Hourly Total | 3 | 147 | 83 | 0 | 233 | 11 | 145 | 122 | 0 | 278 | 188 | 373 | 3 | 0 | 564 | 59 | 236 | 5 | 0 | 300 | 1375 |
| Grand Total | 8 | 290 | 160 | 0 | 458 | 27 | 295 | 240 | 0 | 562 | 357 | 725 | 6 | 0 | 1088 | 110 | 414 | 11 | 0 | 535 | 2643 |
| Approach % | 1.75 | 63.32 | 34.93 | 0.00 | - | 4.80 | 52.49 | 42.70 | 0.00 | - | 32.81 | 66.64 | 0.55 | 0.00 | - | 20.56 | 77.38 | 2.06 | 0.00 | - | - |
| Intersection % | 0.30 | 10.97 | 6.05 | 0.00 | 17.33 | 1.02 | 11.16 | 9.08 | 0.00 | 21.26 | 13.51 | 27.43 | 0.23 | 0.00 | 41.17 | 4.16 | 15.66 | 0.42 | 0.00 | 20.24 | - |
| PHF | 0.75 | 0.91 | 0.64 | 0.00 | 0.86 | 0.70 | 0.82 | 0.83 | 0.00 | 0.91 | 0.80 | 0.96 | 0.50 | 0.00 | 0.98 | 0.67 | 0.81 | 0.38 | 0.00 | 0.78 | 0.94 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 4 of 8

Etley Ave
Driveway
Lexington Rd (West)
Lexington Rd (East)

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.245507°, -85.704528°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound Etley Ave | | | | | Southbound Driveway | | | | | Eastbound Lexington Rd (West) | | | | | Westbound Lexington Rd (East) | | | | | Int Total |
|----------------|-------------------------|-------------|--------------|---------------|--------------|------------------------|-------------|--------------|---------------|--------------|----------------------------------|--------------|---------------|----------------|--------------|----------------------------------|--------------|---------------|----------------|--------------|--------------|
| | 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 | |
| | 0700 - 0715 | 6 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 14 | 0 | 33 | 0 | 68 | 0 | 0 | |
| 0715 - 0730 | 10 | 0 | 2 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 10 | 0 | 37 | 0 | 114 | 0 | 0 | 114 | 163 |
| 0730 - 0745 | 10 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 13 | 0 | 51 | 0 | 152 | 0 | 0 | 152 | 214 |
| 0745 - 0800 | 18 | 0 | 3 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 15 | 0 | 48 | 0 | 133 | 0 | 0 | 133 | 202 |
| Hourly Total | 44 | 0 | 7 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 52 | 0 | 169 | 0 | 467 | 0 | 0 | 467 | 687 |
| 0800 - 0815 | 18 | 0 | 2 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 8 | 0 | 30 | 0 | 123 | 0 | 0 | 123 | 173 |
| 0815 - 0830 | 12 | 0 | 2 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 10 | 0 | 46 | 0 | 138 | 0 | 0 | 138 | 198 |
| 0830 - 0845 | 14 | 0 | 4 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 17 | 0 | 68 | 0 | 131 | 0 | 0 | 131 | 217 |
| 0845 - 0900 | 12 | 0 | 2 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 13 | 0 | 52 | 1 | 115 | 0 | 0 | 116 | 182 |
| Hourly Total | 56 | 0 | 10 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 148 | 48 | 0 | 196 | 1 | 507 | 0 | 0 | 508 | 770 |
| Grand Total | 100 | 0 | 17 | 0 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 265 | 100 | 0 | 365 | 1 | 974 | 0 | 0 | 975 | 1457 |
| Approach % | 85.47 | 0.00 | 14.53 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 72.60 | 27.40 | 0.00 | - | 0.10 | 99.90 | 0.00 | 0.00 | - | |
| Intersection % | 6.86 | 0.00 | 1.17 | 0.00 | 8.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.19 | 6.86 | 0.00 | 25.05 | 0.07 | 66.85 | 0.00 | 0.00 | 66.92 | |
| PHF | 0.86 | 0.00 | 0.69 | 0.00 | 0.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.70 | 0.74 | 0.00 | 0.71 | 0.00 | 0.95 | 0.00 | 0.00 | 0.95 | 0.91 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound Etley Ave | | | | | Southbound Driveway | | | | | Eastbound Lexington Rd (West) | | | | | Westbound Lexington Rd (East) | | | | | Int Total |
|----------------|-------------------------|-------------|--------------|---------------|--------------|------------------------|-------------|--------------|---------------|--------------|----------------------------------|--------------|---------------|----------------|--------------|----------------------------------|--------------|---------------|----------------|--------------|--------------|
| | 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 | |
| | 1600 - 1615 | 8 | 0 | 4 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 17 | 0 | 112 | 0 | 70 | 0 | 0 | |
| 1615 - 1630 | 9 | 0 | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 106 | 24 | 0 | 130 | 0 | 61 | 0 | 0 | 61 | 203 |
| 1630 - 1645 | 14 | 0 | 3 | 0 | 17 | 1 | 0 | 0 | 0 | 1 | 0 | 110 | 16 | 0 | 126 | 2 | 67 | 0 | 0 | 69 | 213 |
| 1645 - 1700 | 19 | 0 | 0 | 0 | 19 | 0 | 1 | 0 | 0 | 1 | 0 | 160 | 22 | 0 | 182 | 2 | 56 | 0 | 0 | 58 | 260 |
| Hourly Total | 50 | 0 | 10 | 0 | 60 | 1 | 1 | 0 | 0 | 2 | 0 | 471 | 79 | 0 | 550 | 4 | 254 | 0 | 0 | 258 | 870 |
| 1700 - 1715 | 11 | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 1 | 164 | 35 | 0 | 200 | 1 | 75 | 0 | 0 | 76 | 288 |
| 1715 - 1730 | 13 | 0 | 4 | 0 | 17 | 1 | 1 | 1 | 0 | 3 | 0 | 145 | 36 | 0 | 181 | 1 | 92 | 0 | 0 | 93 | 294 |
| 1730 - 1745 | 14 | 1 | 4 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 33 | 0 | 169 | 0 | 95 | 0 | 0 | 95 | 283 |
| 1745 - 1800 | 15 | 0 | 4 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 1 | 99 | 15 | 0 | 115 | 0 | 99 | 0 | 0 | 99 | 233 |
| Hourly Total | 53 | 1 | 13 | 0 | 67 | 1 | 1 | 1 | 0 | 3 | 2 | 544 | 119 | 0 | 665 | 2 | 361 | 0 | 0 | 363 | 1098 |
| Grand Total | 103 | 1 | 23 | 0 | 127 | 2 | 2 | 1 | 0 | 5 | 2 | 1015 | 198 | 0 | 1215 | 6 | 615 | 0 | 0 | 621 | 1968 |
| Approach % | 81.10 | 0.79 | 18.11 | 0.00 | - | 40.00 | 40.00 | 20.00 | 0.00 | - | 0.16 | 83.54 | 16.30 | 0.00 | - | 0.97 | 99.03 | 0.00 | 0.00 | - | |
| Intersection % | 5.23 | 0.05 | 1.17 | 0.00 | 6.45 | 0.10 | 0.10 | 0.05 | 0.00 | 0.25 | 0.10 | 51.58 | 10.06 | 0.00 | 61.74 | 0.30 | 31.25 | 0.00 | 0.00 | 31.55 | |
| PHF | 0.75 | 0.25 | 0.56 | 0.00 | 0.88 | 0.25 | 0.50 | 0.25 | 0.00 | 0.33 | 0.25 | 0.92 | 0.88 | 0.00 | 0.92 | 0.50 | 0.84 | 0.00 | 0.00 | 0.85 | 0.96 |

One Park North
Lexington Road at Grinstead Drive
Traffic Impact Study



www.marrtraffic.com

Classified Turn Movement Count || All vehicles

Jefferson County, KY

Site 6 of 8

Alta Vista Rd (South)
Alta Vista Rd (North)
US-60 ALT Lexington Rd (West)
US-60 ALT Lexington Rd (East)

Date

Tuesday, April 26, 2022

Weather

Fair
53°F

Lat/Long

38.245337°, -85.687911°

0700 - 0900 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Int Total |
|----------------|-----------------------|----------|-----------|------------|-----------|-----------------------|----------|-----------|------------|-----------|-------------------------------|-----------|------------|-------------|-----------|-------------------------------|-----------|------------|-------------|-----------|-----------|
| | Alta Vista Rd (South) | | | | | Alta Vista Rd (North) | | | | | US-60 ALT Lexington Rd (West) | | | | | US-60 ALT Lexington Rd (East) | | | | | |
| | Left 6.1 | Thru 6.2 | Right 6.3 | U-Turn 6.4 | App Total | Left 6.5 | Thru 6.6 | Right 6.7 | U-Turn 6.8 | App Total | Left 6.9 | Thru 6.10 | Right 6.11 | U-Turn 6.12 | App Total | Left 6.13 | Thru 6.14 | Right 6.15 | U-Turn 6.16 | App Total | |
| 0700 - 0715 | 5 | 0 | 8 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 1 | 62 | 6 | 0 | 69 | 5 | 83 | 0 | 0 | 88 | 170 |
| 0715 - 0730 | 12 | 2 | 20 | 0 | 34 | 0 | 1 | 1 | 0 | 2 | 1 | 82 | 4 | 0 | 87 | 7 | 111 | 0 | 0 | 118 | 241 |
| 0730 - 0745 | 14 | 3 | 29 | 0 | 46 | 1 | 1 | 0 | 0 | 2 | 0 | 119 | 12 | 0 | 131 | 9 | 156 | 0 | 0 | 165 | 344 |
| 0745 - 0800 | 21 | 2 | 18 | 0 | 41 | 0 | 1 | 0 | 0 | 1 | 0 | 99 | 7 | 0 | 106 | 12 | 153 | 0 | 0 | 165 | 313 |
| Hourly Total | 52 | 7 | 75 | 0 | 134 | 1 | 3 | 1 | 0 | 5 | 2 | 362 | 29 | 0 | 393 | 33 | 503 | 0 | 0 | 536 | 1068 |
| 0800 - 0815 | 16 | 3 | 6 | 0 | 25 | 0 | 1 | 0 | 0 | 1 | 0 | 112 | 12 | 0 | 124 | 4 | 136 | 0 | 0 | 140 | 290 |
| 0815 - 0830 | 19 | 2 | 13 | 0 | 34 | 1 | 1 | 1 | 0 | 3 | 1 | 85 | 9 | 0 | 95 | 9 | 128 | 0 | 0 | 137 | 269 |
| 0830 - 0845 | 21 | 4 | 8 | 0 | 33 | 0 | 0 | 2 | 0 | 2 | 0 | 98 | 9 | 0 | 107 | 8 | 151 | 2 | 0 | 161 | 303 |
| 0845 - 0900 | 24 | 4 | 10 | 0 | 38 | 1 | 0 | 0 | 0 | 1 | 0 | 117 | 8 | 0 | 125 | 6 | 122 | 2 | 0 | 130 | 294 |
| Hourly Total | 80 | 13 | 37 | 0 | 130 | 2 | 2 | 3 | 0 | 7 | 1 | 412 | 38 | 0 | 451 | 27 | 537 | 4 | 0 | 568 | 1156 |
| Grand Total | 132 | 20 | 112 | 0 | 264 | 3 | 5 | 4 | 0 | 12 | 3 | 774 | 67 | 0 | 844 | 60 | 1040 | 4 | 0 | 1104 | 2224 |
| Approach % | 50.00 | 7.58 | 42.42 | 0.00 | - | 25.00 | 41.67 | 33.33 | 0.00 | - | 0.36 | 91.71 | 7.94 | 0.00 | - | 5.43 | 94.20 | 0.36 | 0.00 | - | |
| Intersection % | 5.94 | 0.90 | 5.04 | 0.00 | 11.87 | 0.13 | 0.22 | 0.18 | 0.00 | 0.54 | 0.13 | 34.80 | 3.01 | 0.00 | 37.95 | 2.70 | 46.76 | 0.18 | 0.00 | 49.64 | |
| PHF | 0.83 | 0.83 | 0.57 | 0.00 | 0.79 | 0.50 | 1.00 | 0.25 | 0.00 | 0.58 | 0.25 | 0.87 | 0.83 | 0.00 | 0.87 | 0.71 | 0.92 | 0.00 | 0.00 | 0.92 | 0.88 |

1600 - 1800 (Weekday 2h Session) (04-26-2022)

All vehicles

| TIME | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Int Total |
|----------------|-----------------------|----------|-----------|------------|-----------|-----------------------|----------|-----------|------------|-----------|-------------------------------|-----------|------------|-------------|-----------|-------------------------------|-----------|------------|-------------|-----------|-----------|
| | Alta Vista Rd (South) | | | | | Alta Vista Rd (North) | | | | | US-60 ALT Lexington Rd (West) | | | | | US-60 ALT Lexington Rd (East) | | | | | |
| | Left 6.1 | Thru 6.2 | Right 6.3 | U-Turn 6.4 | App Total | Left 6.5 | Thru 6.6 | Right 6.7 | U-Turn 6.8 | App Total | Left 6.9 | Thru 6.10 | Right 6.11 | U-Turn 6.12 | App Total | Left 6.13 | Thru 6.14 | Right 6.15 | U-Turn 6.16 | App Total | |
| 1600 - 1615 | 10 | 0 | 12 | 0 | 22 | 1 | 2 | 2 | 0 | 5 | 0 | 141 | 15 | 0 | 156 | 10 | 134 | 0 | 0 | 144 | 327 |
| 1615 - 1630 | 17 | 2 | 16 | 0 | 35 | 1 | 5 | 1 | 0 | 7 | 1 | 145 | 16 | 0 | 162 | 12 | 151 | 0 | 0 | 163 | 367 |
| 1630 - 1645 | 19 | 1 | 7 | 0 | 27 | 3 | 3 | 4 | 0 | 10 | 0 | 132 | 14 | 0 | 146 | 13 | 149 | 0 | 0 | 162 | 345 |
| 1645 - 1700 | 15 | 0 | 15 | 0 | 30 | 1 | 4 | 1 | 0 | 6 | 0 | 163 | 19 | 0 | 182 | 14 | 123 | 0 | 0 | 137 | 355 |
| Hourly Total | 61 | 3 | 50 | 0 | 114 | 6 | 14 | 8 | 0 | 28 | 1 | 581 | 64 | 0 | 646 | 49 | 557 | 0 | 0 | 606 | 1394 |
| 1700 - 1715 | 14 | 0 | 13 | 0 | 27 | 2 | 3 | 2 | 0 | 7 | 2 | 160 | 34 | 0 | 196 | 18 | 142 | 0 | 0 | 160 | 390 |
| 1715 - 1730 | 17 | 3 | 19 | 0 | 39 | 0 | 4 | 0 | 0 | 4 | 0 | 166 | 28 | 0 | 194 | 22 | 158 | 0 | 0 | 180 | 417 |
| 1730 - 1745 | 13 | 0 | 11 | 0 | 24 | 0 | 1 | 0 | 0 | 1 | 3 | 158 | 33 | 0 | 194 | 14 | 146 | 0 | 0 | 160 | 379 |
| 1745 - 1800 | 21 | 4 | 10 | 0 | 35 | 2 | 5 | 1 | 0 | 8 | 0 | 147 | 23 | 0 | 170 | 9 | 147 | 0 | 0 | 156 | 369 |
| Hourly Total | 65 | 7 | 53 | 0 | 125 | 4 | 13 | 3 | 0 | 20 | 5 | 631 | 118 | 0 | 754 | 63 | 593 | 0 | 0 | 656 | 1555 |
| Grand Total | 126 | 10 | 103 | 0 | 239 | 10 | 27 | 11 | 0 | 48 | 6 | 1212 | 182 | 0 | 1400 | 112 | 1150 | 0 | 0 | 1262 | 2949 |
| Approach % | 52.72 | 4.18 | 43.10 | 0.00 | - | 20.83 | 56.25 | 22.92 | 0.00 | - | 0.43 | 86.57 | 13.00 | 0.00 | - | 8.87 | 91.13 | 0.00 | 0.00 | - | |
| Intersection % | 4.27 | 0.34 | 3.49 | 0.00 | 8.10 | 0.34 | 0.92 | 0.37 | 0.00 | 1.63 | 0.20 | 41.10 | 6.17 | 0.00 | 47.47 | 3.80 | 39.00 | 0.00 | 0.00 | 42.79 | |
| PHF | 0.77 | 0.44 | 0.70 | 0.00 | 0.80 | 0.50 | 0.65 | 0.38 | 0.00 | 0.63 | 0.42 | 0.95 | 0.87 | 0.00 | 0.96 | 0.72 | 0.94 | 0.00 | 0.00 | 0.91 | 0.93 |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

Signal Warrant Hourly Calculation using 11th Edition ITE

| Land Use | ITE Code | Size | Daily Trips | Daily Exit Trips |
|---------------------|----------|------------|-------------|------------------|
| Office | 710 | 100,000 sf | 1,160 | 580 |
| Grocery | 850 | 52,000 sf | 4,876 | 2,438 |
| Strip Retail | 822 | 9,719 sf | 640 | 320 |
| Multi-Family (4-10) | 221 | 205 units | 931 | 466 |
| | | | 7,607 | 3,804 |

% from ITE Vehicle Time of Day Distribution

| Time | Exit | Exit | Total | Exit | 80% | |
|-------|-------|------|-------|-------|-----------|----------------|
| | 710 | 850 | 822 | 221 | Hour Exit | Left/Thru exit |
| 7:00 | 2.0% | 1.4% | 2.2% | 14.7% | 122 | 98 |
| 8:00 | 3.4% | 3.3% | 4.5% | 12.5% | 172 | 138 |
| 9:00 | 4.4% | 4.4% | 5.8% | 6.9% | 184 | 147 |
| 10:00 | 6.0% | 5.4% | 6.5% | 4.6% | 208 | 166 |
| 11:00 | 10.3% | 7.3% | 6.3% | 4.0% | 277 | 222 |
| 12:00 | 10.1% | 9.9% | 6.1% | 4.8% | 343 | 274 |
| 1:00 | 6.6% | 7.5% | 6.9% | 4.4% | 263 | 210 |
| 2:00 | 6.5% | 9.2% | 6.1% | 3.7% | 298 | 238 |
| 3:00 | 8.4% | 8.5% | 7.4% | 3.8% | 297 | 238 |
| 4:00 | 15.2% | 9.7% | 8.0% | 5.1% | 373 | 298 |
| 5:00 | 15.8% | 9.5% | 8.0% | 5.8% | 375 | 300 |
| 6:00 | 2.6% | 9.3% | 8.0% | 6.0% | 294 | 235 |
| 7:00 | 2.3% | 6.6% | 8.5% | 5.4% | 228 | 182 |

For land use 822, the total volume by hour is provided, therefore for the calculation 50% is assumed as exiting.

Highway Capacity Reports

2022 AM HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 676 | 171 | 177 | 170 | 260 | 0 | 0 | 457 | 163 |
| Future Volume (veh/h) | 0 | 0 | 0 | 676 | 171 | 177 | 170 | 260 | 0 | 0 | 457 | 163 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | No | No | No | No | No | No | No | No |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1870 | 1826 | 0 | 0 | 1870 | 1900 |
| Adj Flow Rate, veh/h | | | | 768 | 194 | 201 | 198 | 302 | 0 | 0 | 531 | 0 |
| Peak Hour Factor | | | | 0.88 | 0.88 | 0.88 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 2 | 5 | 0 | 0 | 2 | 0 |
| Cap, veh/h | | | | 823 | 389 | 403 | 319 | 1382 | 0 | 0 | 982 | 0 |
| Arrive On Green | | | | 0.46 | 0.46 | 0.46 | 0.02 | 0.13 | 0.00 | 0.00 | 0.28 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 848 | 879 | 1781 | 3561 | 0 | 0 | 3647 | 1610 |
| Grp Volume(v), veh/h | | | | 768 | 0 | 395 | 198 | 302 | 0 | 0 | 531 | 0 |
| Grp Sat Flow(s), veh/h/ln | | | | 1795 | 0 | 1727 | 1781 | 1735 | 0 | 0 | 1777 | 1610 |
| Q Serve(g_s), s | | | | 36.5 | 0.0 | 14.5 | 5.5 | 7.0 | 0.0 | 0.0 | 11.4 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 36.5 | 0.0 | 14.5 | 5.5 | 7.0 | 0.0 | 0.0 | 11.4 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.51 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 823 | 0 | 791 | 319 | 1382 | 0 | 0 | 982 | 0 |
| V/C Ratio(X) | | | | 0.93 | 0.00 | 0.50 | 0.62 | 0.22 | 0.00 | 0.00 | 0.54 | 0.00 |
| Avail Cap(c_a), veh/h | | | | 840 | 0 | 808 | 319 | 1382 | 0 | 0 | 982 | 0 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.98 | 0.98 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 23.1 | 0.0 | 17.1 | 25.6 | 26.6 | 0.0 | 0.0 | 27.7 | 0.0 |
| Incr Delay (d2), s/veh | | | | 17.6 | 0.0 | 1.0 | 3.2 | 0.4 | 0.0 | 0.0 | 2.1 | 0.0 |
| Initial Q Delay(d3), s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%), veh/ln | | | | 18.3 | 0.0 | 5.7 | 1.4 | 3.1 | 0.0 | 0.0 | 5.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 40.7 | 0.0 | 18.2 | 28.8 | 26.9 | 0.0 | 0.0 | 29.8 | 0.0 |
| LnGrp LOS | | | | D | A | B | C | C | A | A | C | |
| Approach Vol, veh/h | | | | | 1163 | | | 500 | | | 531 | |
| Approach Delay, s/veh | | | | | 33.0 | | | 27.6 | | | 29.8 | |
| Approach LOS | | | | | C | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 41.9 | | 48.1 | 11.0 | 30.9 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 35.0 | | * 42 | * 5.5 | 24.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 9.0 | | 38.5 | 7.5 | 13.4 | | | | | | |
| Green Ext Time (p_c), s | | 0.8 | | 2.8 | 0.0 | 1.1 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 31.0 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM HCM 6th Signalized Intersection Summary
 102: Grinstead Dr & I-64 EB Ramp 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|-------|------|------|-----|-----|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | ↗ | | | | | ↕ | ↗ | ↘ | ↕ | |
| Traffic Volume (veh/h) | 86 | 0 | 292 | 0 | 0 | 0 | 0 | 359 | 632 | 195 | 915 | 0 |
| Future Volume (veh/h) | 86 | 0 | 292 | 0 | 0 | 0 | 0 | 359 | 632 | 195 | 915 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1781 | 1900 | 1841 | | | | 0 | 1856 | 1870 | 1856 | 1885 | 0 |
| Adj Flow Rate, veh/h | 101 | 0 | 0 | | | | 0 | 422 | 0 | 229 | 1076 | 0 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | | | | 0.92 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Percent Heavy Veh, % | 8 | 0 | 4 | | | | 0 | 3 | 2 | 3 | 1 | 0 |
| Cap, veh/h | 132 | 0 | | | | | 0 | 2242 | | 761 | 2770 | 0 |
| Arrive On Green | 0.07 | 0.00 | 0.00 | | | | 0.00 | 0.64 | 0.00 | 0.09 | 1.00 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1560 | | | | 0 | 3618 | 1585 | 1767 | 3676 | 0 |
| Grp Volume(v), veh/h | 101 | 0 | 0 | | | | 0 | 422 | 0 | 229 | 1076 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1560 | | | | 0 | 1763 | 1585 | 1767 | 1791 | 0 |
| Q Serve(g_s), s | 4.9 | 0.0 | 0.0 | | | | 0.0 | 4.5 | 0.0 | 3.8 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.9 | 0.0 | 0.0 | | | | 0.0 | 4.5 | 0.0 | 3.8 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 132 | 0 | | | | | 0 | 2242 | | 761 | 2770 | 0 |
| V/C Ratio(X) | 0.76 | 0.00 | | | | | 0.00 | 0.19 | | 0.30 | 0.39 | 0.00 |
| Avail Cap(c_a), veh/h | 292 | 0 | | | | | 0 | 2242 | | 871 | 2770 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.45 | 0.00 | 0.54 | 0.54 | 0.00 |
| Uniform Delay (d), s/veh | 40.9 | 0.0 | 0.0 | | | | 0.0 | 6.8 | 0.0 | 4.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 8.7 | 0.0 | 0.0 | | | | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.5 | 0.0 | 0.0 | | | | 0.0 | 1.5 | 0.0 | 1.0 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 49.7 | 0.0 | 0.0 | | | | 0.0 | 6.9 | 0.0 | 4.2 | 0.2 | 0.0 |
| LnGrp LOS | D | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 101 | | | | | | 422 | | | 1305 | |
| Approach Delay, s/veh | | 49.7 | | | | | | 6.9 | | | 0.9 | |
| Approach LOS | | D | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.4 | 64.5 | | | | 76.9 | | 13.1 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | * 12 | 43.7 | | | | 61.7 | | 14.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 5.8 | 6.5 | | | | 2.0 | | 6.9 | | | | |
| Green Ext Time (p_c), s | 0.3 | 3.1 | | | | 10.7 | | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 5.0 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |











One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↘ | ↕ | ↗ | ↘ | ↕ | ↗ | | ↕ | ↗ | ↘ | ↕ | ↗ |
| Traffic Volume (veh/h) | 78 | 62 | 1 | 209 | 193 | 36 | 0 | 833 | 275 | 113 | 734 | 356 |
| Future Volume (veh/h) | 78 | 62 | 1 | 209 | 193 | 36 | 0 | 833 | 275 | 113 | 734 | 356 |
| 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 | 1870 | 1900 | 1856 | 1885 | 1781 | 0 | 1870 | 1870 | 1841 | 1870 | 1885 |
| Adj Flow Rate, veh/h | 87 | 69 | 1 | 232 | 214 | 40 | 0 | 926 | 306 | 126 | 816 | 396 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 4 | 2 | 0 | 3 | 1 | 8 | 0 | 2 | 2 | 4 | 2 | 1 |
| Cap, veh/h | 146 | 298 | 4 | 628 | 345 | 277 | 0 | 1053 | 760 | 158 | 1100 | 531 |
| Arrive On Green | 0.08 | 0.08 | 0.08 | 0.18 | 0.18 | 0.18 | 0.00 | 0.30 | 0.30 | 0.09 | 0.47 | 0.47 |
| Sat Flow, veh/h | 1753 | 3586 | 52 | 3428 | 1885 | 1510 | 0 | 3647 | 1585 | 1753 | 2323 | 1122 |
| Grp Volume(v), veh/h | 87 | 34 | 36 | 232 | 214 | 40 | 0 | 926 | 306 | 126 | 623 | 589 |
| Grp Sat Flow(s), veh/h/ln | 1753 | 1777 | 1861 | 1714 | 1885 | 1510 | 0 | 1777 | 1585 | 1753 | 1777 | 1668 |
| Q Serve(g_s), s | 3.9 | 1.5 | 1.5 | 4.9 | 8.6 | 1.8 | 0.0 | 20.3 | 10.2 | 5.8 | 23.3 | 23.5 |
| Cycle Q Clear(g_c), s | 3.9 | 1.5 | 1.5 | 4.9 | 8.6 | 1.8 | 0.0 | 20.3 | 10.2 | 5.8 | 23.3 | 23.5 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.67 |
| Lane Grp Cap(c), veh/h | 146 | 148 | 155 | 628 | 345 | 277 | 0 | 1053 | 760 | 158 | 841 | 790 |
| V/C Ratio(X) | 0.60 | 0.23 | 0.23 | 0.37 | 0.62 | 0.14 | 0.00 | 0.88 | 0.40 | 0.80 | 0.74 | 0.75 |
| Avail Cap(c_a), veh/h | 150 | 152 | 159 | 875 | 481 | 385 | 0 | 1142 | 800 | 158 | 918 | 862 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.2 | 35.1 | 35.1 | 29.3 | 30.8 | 28.1 | 0.0 | 27.4 | 13.7 | 36.5 | 17.5 | 17.5 |
| Incr Delay (d2), s/veh | 4.1 | 0.3 | 0.3 | 0.4 | 1.8 | 0.2 | 0.0 | 7.2 | 0.1 | 23.8 | 2.4 | 2.7 |
| 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 | 1.8 | 0.6 | 0.7 | 2.0 | 4.0 | 0.7 | 0.0 | 9.1 | 4.9 | 3.5 | 9.3 | 8.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 40.3 | 35.4 | 35.4 | 29.7 | 32.6 | 28.3 | 0.0 | 34.6 | 13.9 | 60.3 | 19.9 | 20.3 |
| LnGrp LOS | D | D | D | C | C | C | A | C | B | E | B | C |
| Approach Vol, veh/h | | 157 | | | 486 | | | 1232 | | | 1338 | |
| Approach Delay, s/veh | | 38.1 | | | 30.8 | | | 29.4 | | | 23.9 | |
| Approach LOS | | D | | | C | | | C | | | C | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 13.9 | 14.5 | 31.4 | | 22.1 | | 45.9 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 7.0 | 7.4 | 26.3 | | 20.9 | | * 42 | | | | |
| Max Q Clear Time (g_c+I1), s | | 5.9 | 7.8 | 22.3 | | 10.6 | | 25.5 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 2.0 | | 1.6 | | 5.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 27.8 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |




















One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM HCM Signalized Intersection Capacity Analysis
 106: Grinstead Dr & Cherokee Pkwy 07/19/2022

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | |  |  | |  |  |
| Traffic Volume (vph) | 0 | 587 | 613 | 14 | 354 | 619 |
| Future Volume (vph) | 0 | 587 | 613 | 14 | 354 | 619 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 0.95 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1611 | 3563 | | 1770 | 1881 |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1611 | 3563 | | 1863 | 1881 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 0 | 660 | 689 | 16 | 398 | 696 |
| RTOR Reduction (vph) | 0 | 150 | 2 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 510 | 703 | 0 | 398 | 696 |
| Heavy Vehicles (%) | 0% | 2% | 1% | 0% | 2% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 24.5 | 44.5 | | 69.0 | 80.0 |
| Effective Green, g (s) | | 24.5 | 44.5 | | 69.0 | 80.0 |
| Actuated g/C Ratio | | 0.31 | 0.56 | | 0.86 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 493 | 1981 | | 1578 | 1881 |
| v/s Ratio Prot | | | 0.20 | | 0.08 | 0.37 |
| v/s Ratio Perm | | c0.32 | | | 0.14 | |
| v/c Ratio | | 1.03 | 0.35 | | 0.25 | 0.37 |
| Uniform Delay, d ₁ | | 27.8 | 9.8 | | 11.4 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d ₂ | | 49.8 | 0.5 | | 0.1 | 0.6 |
| Delay (s) | | 77.5 | 10.3 | | 11.5 | 0.6 |
| Level of Service | | E | B | | B | A |
| Approach Delay (s) | 77.5 | | 10.3 | | | 4.6 |
| Approach LOS | E | | B | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 25.8 | | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | | | 0.64 | | | |
| Actuated Cycle Length (s) | | | 80.0 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 62.9% | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |




















One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM HCM 6th Signalized Intersection Summary
 107: Payne St & Lexington Rd 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 84 | 98 | 3 | 52 | 427 | 5 | 3 | 126 | 33 | 2 | 135 | 123 |
| Future Volume (veh/h) | 84 | 98 | 3 | 52 | 427 | 5 | 3 | 126 | 33 | 2 | 135 | 123 |
| 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 | 1870 | 1900 | 1900 | 1796 | 1870 | 1900 | 1796 | 1856 | 1900 | 1841 | 1856 |
| Adj Flow Rate, veh/h | 99 | 115 | 4 | 61 | 502 | 6 | 4 | 148 | 39 | 2 | 138 | 126 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 5 | 2 | 0 | 0 | 7 | 2 | 0 | 7 | 3 | 0 | 4 | 3 |
| Cap, veh/h | 542 | 1169 | 41 | 906 | 1153 | 14 | 51 | 268 | 69 | 49 | 174 | 157 |
| Arrive On Green | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Sat Flow, veh/h | 870 | 1797 | 62 | 1293 | 1771 | 21 | 11 | 1367 | 353 | 3 | 889 | 803 |
| Grp Volume(v), veh/h | 99 | 0 | 119 | 61 | 0 | 508 | 191 | 0 | 0 | 266 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 870 | 0 | 1859 | 1293 | 0 | 1792 | 1731 | 0 | 0 | 1694 | 0 | 0 |
| Q Serve(g_s), s | 4.7 | 0.0 | 1.8 | 1.4 | 0.0 | 10.4 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 15.1 | 0.0 | 1.8 | 3.2 | 0.0 | 10.4 | 7.5 | 0.0 | 0.0 | 11.2 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 0.01 | 0.02 | | 0.20 | 0.01 | | 0.47 |
| Lane Grp Cap(c), veh/h | 542 | 0 | 1210 | 906 | 0 | 1166 | 388 | 0 | 0 | 380 | 0 | 0 |
| V/C Ratio(X) | 0.18 | 0.00 | 0.10 | 0.07 | 0.00 | 0.44 | 0.49 | 0.00 | 0.00 | 0.70 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 542 | 0 | 1210 | 906 | 0 | 1166 | 760 | 0 | 0 | 748 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 10.1 | 0.0 | 4.9 | 5.5 | 0.0 | 6.4 | 27.2 | 0.0 | 0.0 | 28.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 0.2 | 0.1 | 0.0 | 1.2 | 1.0 | 0.0 | 0.0 | 2.3 | 0.0 | 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 | 0.9 | 0.0 | 0.6 | 0.3 | 0.0 | 3.5 | 3.1 | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 10.8 | 0.0 | 5.0 | 5.6 | 0.0 | 7.6 | 28.2 | 0.0 | 0.0 | 31.1 | 0.0 | 0.0 |
| LnGrp LOS | B | A | A | A | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 218 | | | 569 | | | 191 | | | 266 | |
| Approach Delay, s/veh | | 7.7 | | | 7.4 | | | 28.2 | | | 31.1 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 54.4 | | 20.6 | | 54.4 | | 20.6 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 32.5 | | * 31 | | 32.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.1 | | 13.2 | | 12.4 | | 9.5 | | | | |
| Green Ext Time (p_c), s | | 1.0 | | 1.5 | | 3.5 | | 1.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 15.7 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM HCM 6th Signalized Intersection Summary
 108: Alta Vista Rd & Lexington Rd 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 4 | 414 | 40 | 34 | 571 | 0 | 70 | 10 | 66 | 2 | 3 | 1 |
| Future Volume (veh/h) | 4 | 414 | 40 | 34 | 571 | 0 | 70 | 10 | 66 | 2 | 3 | 1 |
| 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 | 1900 | 1870 | 1826 | 1856 | 1870 | 1900 | 1900 | 1900 | 1826 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 5 | 470 | 45 | 39 | 649 | 0 | 80 | 11 | 75 | 2 | 3 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 0 | 2 | 5 | 3 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Cap, veh/h | 490 | 1045 | 100 | 573 | 1163 | 0 | 214 | 34 | 109 | 154 | 177 | 45 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.00 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 795 | 1680 | 161 | 879 | 1870 | 0 | 639 | 219 | 707 | 326 | 1149 | 295 |
| Grp Volume(v), veh/h | 5 | 0 | 515 | 39 | 649 | 0 | 166 | 0 | 0 | 6 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 795 | 0 | 1841 | 879 | 1870 | 0 | 1565 | 0 | 0 | 1771 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 6.8 | 1.1 | 9.3 | 0.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.5 | 0.0 | 6.8 | 7.9 | 9.3 | 0.0 | 4.6 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.09 | 1.00 | | 0.00 | 0.48 | | 0.45 | 0.33 | | 0.17 |
| Lane Grp Cap(c), veh/h | 490 | 0 | 1145 | 573 | 1163 | 0 | 356 | 0 | 0 | 376 | 0 | 0 |
| V/C Ratio(X) | 0.01 | 0.00 | 0.45 | 0.07 | 0.56 | 0.00 | 0.47 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 490 | 0 | 1145 | 573 | 1163 | 0 | 809 | 0 | 0 | 854 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.8 | 0.0 | 4.6 | 6.7 | 5.1 | 0.0 | 18.5 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 1.3 | 0.2 | 1.9 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 1.8 | 0.2 | 2.6 | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.9 | 0.0 | 5.9 | 6.9 | 7.0 | 0.0 | 18.8 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 520 | | | 688 | | | 166 | | | | 6 |
| Approach Delay, s/veh | | 5.9 | | | 7.0 | | | 18.8 | | | | 16.6 |
| Approach LOS | | A | | | A | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.0 | | 12.3 | | 34.0 | | 12.3 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 29 | | * 21 | | * 29 | | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | | 11.5 | | 6.6 | | 11.3 | | 2.1 | | | | |
| Green Ext Time (p_c), s | | 5.0 | | 0.5 | | 6.9 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 8.1 | | | | | | | | |
| HCM 6th LOS | | | | A | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM
 104: Etley Ave & Lexington Rd

HCM 6th TWSC
 07/19/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 141 | 50 | 0 | 523 | 62 | 11 |
| Future Vol, veh/h | 141 | 50 | 0 | 523 | 62 | 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 | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 3 | 0 | 0 | 1 | 2 | 0 |
| Mvmt Flow | 155 | 55 | 0 | 575 | 68 | 12 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 210 | 0 | 758 |
| Stage 1 | - | - | - | - | 183 |
| Stage 2 | - | - | - | - | 575 |
| Critical Hdwy | - | - | 4.1 | - | 6.63 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.83 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | - | - | 2.2 | - | 3.519 |
| Pot Cap-1 Maneuver | - | - | 1373 | - | 359 |
| Stage 1 | - | - | - | - | 831 |
| Stage 2 | - | - | - | - | 562 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1373 | - | 359 |
| Mov Cap-2 Maneuver | - | - | - | - | 457 |
| Stage 1 | - | - | - | - | 831 |
| Stage 2 | - | - | - | - | 562 |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 0 | 13.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 495 | - | - | 1373 | - |
| HCM Lane V/C Ratio | 0.162 | - | - | - | - |
| HCM Control Delay (s) | 13.7 | - | - | 0 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.6 | - | - | 0 | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 AM
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/19/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | |
| Movement | SBL | SBR | NEL | NET | SWT | SWR |
| Lane Configurations | Y | | | ↑↑ | ↑↓ | |
| Traffic Vol, veh/h | 4 | 51 | 71 | 1134 | 922 | 13 |
| Future Vol, veh/h | 4 | 51 | 71 | 1134 | 922 | 13 |
| 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 | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 25 | 0 | 3 | 2 | 2 | 0 |
| Mvmt Flow | 5 | 58 | 81 | 1289 | 1048 | 15 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 1863 | 532 | 1063 | 0 | - |
| Stage 1 | 1056 | - | - | - | - |
| Stage 2 | 807 | - | - | - | - |
| Critical Hdwy | 7.3 | 6.9 | 4.16 | - | - |
| Critical Hdwy Stg 1 | 6.3 | - | - | - | - |
| Critical Hdwy Stg 2 | 6.3 | - | - | - | - |
| Follow-up Hdwy | 3.75 | 3.3 | 2.23 | - | - |
| Pot Cap-1 Maneuver | 50 | 497 | 645 | - | - |
| Stage 1 | 249 | - | - | - | - |
| Stage 2 | 346 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 28 | 497 | 645 | - | - |
| Mov Cap-2 Maneuver | 28 | - | - | - | - |
| Stage 1 | 139 | - | - | - | - |
| Stage 2 | 346 | - | - | - | - |

| Approach | SB | NE | SW |
|----------------------|------|-----|----|
| HCM Control Delay, s | 27.2 | 2.7 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NEL | NET SBLn1 | SWT | SWR |
|-----------------------|-------|-----------|-------|-----|
| Capacity (veh/h) | 645 | - | 224 | - |
| HCM Lane V/C Ratio | 0.125 | - | 0.279 | - |
| HCM Control Delay (s) | 11.4 | 2.2 | 27.2 | - |
| HCM Lane LOS | B | A | D | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 1.1 | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study




















26 AM No Build HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 746 | 178 | 184 | 204 | 289 | 0 | 0 | 505 | 170 |
| Future Volume (veh/h) | 0 | 0 | 0 | 746 | 178 | 184 | 204 | 289 | 0 | 0 | 505 | 170 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | | | No | | No | | No | | | No | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1870 | 1826 | 0 | 0 | 1870 | 1900 |
| Adj Flow Rate, veh/h | | | | 867 | 207 | 214 | 237 | 336 | 0 | 0 | 587 | 0 |
| Peak Hour Factor | | | | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 2 | 5 | 0 | 0 | 2 | 0 |
| Cap, veh/h | | | | 840 | 397 | 411 | 290 | 1349 | 0 | 0 | 948 | |
| Arrive On Green | | | | 0.47 | 0.47 | 0.47 | 0.02 | 0.13 | 0.00 | 0.00 | 0.27 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 849 | 878 | 1781 | 3561 | 0 | 0 | 3647 | 1610 |
| Grp Volume(v), veh/h | | | | 867 | 0 | 421 | 237 | 336 | 0 | 0 | 587 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1795 | 0 | 1727 | 1781 | 1735 | 0 | 0 | 1777 | 1610 |
| Q Serve(g_s), s | | | | 42.1 | 0.0 | 15.4 | 5.5 | 7.8 | 0.0 | 0.0 | 13.1 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 42.1 | 0.0 | 15.4 | 5.5 | 7.8 | 0.0 | 0.0 | 13.1 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.51 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 840 | 0 | 808 | 290 | 1349 | 0 | 0 | 948 | |
| V/C Ratio(X) | | | | 1.03 | 0.00 | 0.52 | 0.82 | 0.25 | 0.00 | 0.00 | 0.62 | |
| Avail Cap(c_a), veh/h | | | | 840 | 0 | 808 | 290 | 1349 | 0 | 0 | 948 | |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.97 | 0.97 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 24.0 | 0.0 | 16.9 | 30.2 | 27.4 | 0.0 | 0.0 | 29.0 | 0.0 |
| Incr Delay (d2), s/veh | | | | 39.7 | 0.0 | 1.2 | 15.8 | 0.4 | 0.0 | 0.0 | 3.0 | 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 |
| %ile BackOfQ(50%),veh/ln | | | | 25.7 | 0.0 | 6.1 | 3.7 | 3.5 | 0.0 | 0.0 | 5.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 63.6 | 0.0 | 18.0 | 46.0 | 27.8 | 0.0 | 0.0 | 32.0 | 0.0 |
| LnGrp LOS | | | | F | A | B | D | C | A | A | C | |
| Approach Vol, veh/h | | | | | 1288 | | | 573 | | | 587 | |
| Approach Delay, s/veh | | | | | 48.7 | | | 35.3 | | | 32.0 | |
| Approach LOS | | | | | D | | | D | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 41.0 | | 49.0 | 11.0 | 30.0 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 35.0 | | * 42 | * 5.5 | 24.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 9.8 | | 44.1 | 7.5 | 15.1 | | | | | | |
| Green Ext Time (p_c), s | | 0.9 | | 0.0 | 0.0 | 1.2 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 41.6 | | | | | | | | |
| HCM 6th LOS | | | | D | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build
 102: Grinstead Dr & I-64 EB Ramp

HCM 6th Signalized Intersection Summary
 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  |  | | | | |  |  |  |  |  |
| Traffic Volume (veh/h) | 89 | 0 | 347 | 0 | 0 | 0 | 0 | 419 | 685 | 203 | 1024 | 0 |
| Future Volume (veh/h) | 89 | 0 | 347 | 0 | 0 | 0 | 0 | 419 | 685 | 203 | 1024 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | | No |
| Adj Sat Flow, veh/h/ln | 1781 | 1900 | 1841 | | | | 0 | 1856 | 1870 | 1856 | 1885 | 0 |
| Adj Flow Rate, veh/h | 105 | 0 | 0 | | | | 0 | 493 | 0 | 239 | 1205 | 0 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | | | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Percent Heavy Veh, % | 8 | 0 | 4 | | | | 0 | 3 | 2 | 3 | 1 | 0 |
| Cap, veh/h | 137 | 0 | | | | | 0 | 2223 | | 716 | 2761 | 0 |
| Arrive On Green | 0.08 | 0.00 | 0.00 | | | | 0.00 | 0.63 | 0.00 | 0.09 | 1.00 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1560 | | | | 0 | 3618 | 1585 | 1767 | 3676 | 0 |
| Grp Volume(v), veh/h | 105 | 0 | 0 | | | | 0 | 493 | 0 | 239 | 1205 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1560 | | | | 0 | 1763 | 1585 | 1767 | 1791 | 0 |
| Q Serve(g_s), s | 5.1 | 0.0 | 0.0 | | | | 0.0 | 5.4 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 5.1 | 0.0 | 0.0 | | | | 0.0 | 5.4 | 0.0 | 4.0 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 137 | 0 | | | | | 0 | 2223 | | 716 | 2761 | 0 |
| V/C Ratio(X) | 0.76 | 0.00 | | | | | 0.00 | 0.22 | | 0.33 | 0.44 | 0.00 |
| Avail Cap(c_a), veh/h | 292 | 0 | | | | | 0 | 2223 | | 821 | 2761 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.20 | 0.00 | 0.37 | 0.37 | 0.00 |
| Uniform Delay (d), s/veh | 40.8 | 0.0 | 0.0 | | | | 0.0 | 7.1 | 0.0 | 4.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 8.5 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.6 | 0.0 | 0.0 | | | | 0.0 | 1.8 | 0.0 | 1.1 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 49.3 | 0.0 | 0.0 | | | | 0.0 | 7.2 | 0.0 | 4.4 | 0.2 | 0.0 |
| LnGrp LOS | D | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 105 | | | | | | 493 | | | 1444 | |
| Approach Delay, s/veh | | 49.3 | | | | | | 7.2 | | | 0.9 | |
| Approach LOS | | D | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.6 | 64.0 | | | | 76.7 | | 13.3 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | * 12 | 43.7 | | | | 61.7 | | 14.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.0 | 7.4 | | | | 2.0 | | 7.1 | | | | |
| Green Ext Time (p_c), s | 0.3 | 3.7 | | | | 12.8 | | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 4.9 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↖↗ | | ↖↗ | ↖ | ↗ | | ↖↗ | ↖ | ↗ | ↖↗ | ↖↗ |
| Traffic Volume (veh/h) | 153 | 84 | 1 | 247 | 201 | 37 | 0 | 919 | 286 | 118 | 867 | 382 |
| Future Volume (veh/h) | 153 | 84 | 1 | 247 | 201 | 37 | 0 | 919 | 286 | 118 | 867 | 382 |
| 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 | 1870 | 1900 | 1856 | 1885 | 1781 | 0 | 1870 | 1870 | 1841 | 1870 | 1885 |
| Adj Flow Rate, veh/h | 170 | 93 | 1 | 274 | 223 | 41 | 0 | 1021 | 318 | 131 | 963 | 424 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 4 | 2 | 0 | 3 | 1 | 8 | 0 | 2 | 2 | 4 | 2 | 1 |
| Cap, veh/h | 215 | 394 | 4 | 609 | 335 | 268 | 0 | 1044 | 747 | 145 | 1111 | 483 |
| Arrive On Green | 0.11 | 0.11 | 0.11 | 0.18 | 0.18 | 0.18 | 0.00 | 0.29 | 0.29 | 0.08 | 0.46 | 0.46 |
| Sat Flow, veh/h | 1963 | 3602 | 39 | 3428 | 1885 | 1510 | 0 | 3647 | 1585 | 1753 | 2411 | 1047 |
| Grp Volume(v), veh/h | 170 | 46 | 48 | 274 | 223 | 41 | 0 | 1021 | 318 | 131 | 706 | 681 |
| Grp Sat Flow(s),veh/h/ln | 982 | 1777 | 1863 | 1714 | 1885 | 1510 | 0 | 1777 | 1585 | 1753 | 1777 | 1682 |
| Q Serve(g_s), s | 7.1 | 2.0 | 2.0 | 6.0 | 9.3 | 1.9 | 0.0 | 24.0 | 11.2 | 6.3 | 30.0 | 31.0 |
| Cycle Q Clear(g_c), s | 7.1 | 2.0 | 2.0 | 6.0 | 9.3 | 1.9 | 0.0 | 24.0 | 11.2 | 6.3 | 30.0 | 31.0 |
| Prop In Lane | 1.00 | | 0.02 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.62 |
| Lane Grp Cap(c), veh/h | 215 | 194 | 204 | 609 | 335 | 268 | 0 | 1044 | 747 | 145 | 819 | 775 |
| V/C Ratio(X) | 0.79 | 0.24 | 0.24 | 0.45 | 0.67 | 0.15 | 0.00 | 0.98 | 0.43 | 0.90 | 0.86 | 0.88 |
| Avail Cap(c_a), veh/h | 253 | 229 | 241 | 767 | 422 | 338 | 0 | 1044 | 747 | 145 | 850 | 805 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.7 | 34.4 | 34.4 | 31.0 | 32.4 | 29.3 | 0.0 | 29.5 | 14.8 | 38.4 | 20.4 | 20.6 |
| Incr Delay (d2), s/veh | 11.2 | 0.2 | 0.2 | 0.5 | 2.7 | 0.3 | 0.0 | 22.5 | 0.1 | 46.6 | 8.4 | 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 | 2.0 | 0.9 | 0.9 | 2.5 | 4.4 | 0.7 | 0.0 | 12.9 | 5.4 | 4.5 | 13.4 | 13.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 47.9 | 34.6 | 34.6 | 31.6 | 35.1 | 29.6 | 0.0 | 52.1 | 14.9 | 85.0 | 28.7 | 30.8 |
| LnGrp LOS | D | C | C | C | D | C | A | D | B | F | C | C |
| Approach Vol, veh/h | | 264 | | | 538 | | | 1339 | | | 1518 | |
| Approach Delay, s/veh | | 43.2 | | | 32.9 | | | 43.2 | | | 34.5 | |
| Approach LOS | | D | | | C | | | D | | | C | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 16.3 | 14.1 | 31.9 | | 22.1 | | 46.0 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 10.9 | 7.0 | 24.8 | | 18.9 | | * 40 | | | | |
| Max Q Clear Time (g_c+I1), s | | 9.1 | 8.3 | 26.0 | | 11.3 | | 33.0 | | | | |
| Green Ext Time (p_c), s | | 0.1 | 0.0 | 0.0 | | 1.5 | | 4.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 38.1 | | | | | | | | |
| HCM 6th LOS | | | | D | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study


















26 AM No Build HCM Signalized Intersection Capacity Analysis
 106: Grinstead Dr & Cherokee Pkwy 07/20/2022

| | ↶ | ↷ | ↘ | ↙ | ↵ | ↶ |
|-----------------------------------|------|-------|-------|------|---------------------------|------|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | | ↶ | ↶↷ | | ↶ | ↶ |
| Traffic Volume (vph) | 0 | 640 | 696 | 15 | 386 | 681 |
| Future Volume (vph) | 0 | 640 | 696 | 15 | 386 | 681 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 0.95 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1611 | 3564 | | 1770 | 1881 |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1611 | 3564 | | 1863 | 1881 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 0 | 719 | 782 | 17 | 434 | 765 |
| RTOR Reduction (vph) | 0 | 79 | 2 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 640 | 797 | 0 | 434 | 765 |
| Heavy Vehicles (%) | 0% | 2% | 1% | 0% | 2% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 30.5 | 38.5 | | 69.0 | 80.0 |
| Effective Green, g (s) | | 30.5 | 38.5 | | 69.0 | 80.0 |
| Actuated g/C Ratio | | 0.38 | 0.48 | | 0.86 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 614 | 1715 | | 1571 | 1881 |
| v/s Ratio Prot | | | 0.22 | | 0.11 | 0.41 |
| v/s Ratio Perm | | c0.40 | | | 0.13 | |
| v/c Ratio | | 1.04 | 0.46 | | 0.28 | 0.41 |
| Uniform Delay, d1 | | 24.8 | 13.9 | | 8.6 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 47.7 | 0.9 | | 0.1 | 0.7 |
| Delay (s) | | 72.5 | 14.8 | | 8.7 | 0.7 |
| Level of Service | | E | B | | A | A |
| Approach Delay (s) | 72.5 | | 14.8 | | | 3.6 |
| Approach LOS | E | | B | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 25.1 | | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | | | 0.72 | | | |
| Actuated Cycle Length (s) | | | 80.0 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 68.5% | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build
 107: Payne St & Lexington Rd




















HCM 6th Signalized Intersection Summary
 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | |  | | |  | |
| Traffic Volume (veh/h) | 87 | 147 | 3 | 56 | 479 | 5 | 3 | 131 | 47 | 4 | 145 | 131 |
| Future Volume (veh/h) | 87 | 147 | 3 | 56 | 479 | 5 | 3 | 131 | 47 | 4 | 145 | 131 |
| 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 | 1870 | 1900 | 1870 | 1885 | 1900 | 1900 | 1796 | 1856 | 1900 | 1796 | 1870 |
| Adj Flow Rate, veh/h | 102 | 173 | 4 | 49 | 564 | 6 | 4 | 154 | 55 | 5 | 171 | 154 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.98 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Percent Heavy Veh, % | 5 | 2 | 0 | 2 | 1 | 0 | 0 | 7 | 3 | 0 | 7 | 2 |
| Cap, veh/h | 438 | 1053 | 25 | 778 | 1130 | 12 | 51 | 303 | 106 | 51 | 210 | 185 |
| Arrive On Green | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Sat Flow, veh/h | 573 | 1735 | 41 | 1207 | 1862 | 20 | 9 | 1264 | 443 | 7 | 874 | 771 |
| Grp Volume(v), veh/h | 115 | 0 | 164 | 49 | 0 | 570 | 213 | 0 | 0 | 330 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 654 | 0 | 1695 | 1207 | 0 | 1882 | 1717 | 0 | 0 | 1653 | 0 | 0 |
| Q Serve(g_s), s | 5.6 | 0.0 | 3.2 | 1.4 | 0.0 | 12.8 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 18.4 | 0.0 | 3.2 | 4.5 | 0.0 | 12.8 | 8.1 | 0.0 | 0.0 | 14.2 | 0.0 | 0.0 |
| Prop In Lane | 0.89 | | 0.02 | 1.00 | | 0.01 | 0.02 | | 0.26 | 0.02 | | 0.47 |
| Lane Grp Cap(c), veh/h | 488 | 0 | 1029 | 778 | 0 | 1142 | 460 | 0 | 0 | 445 | 0 | 0 |
| V/C Ratio(X) | 0.24 | 0.00 | 0.16 | 0.06 | 0.00 | 0.50 | 0.46 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 488 | 0 | 1029 | 778 | 0 | 1142 | 754 | 0 | 0 | 730 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 12.7 | 0.0 | 6.4 | 7.4 | 0.0 | 8.3 | 24.7 | 0.0 | 0.0 | 27.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.1 | 0.0 | 0.3 | 0.2 | 0.0 | 1.6 | 0.7 | 0.0 | 0.0 | 2.5 | 0.0 | 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 | 1.3 | 0.0 | 1.1 | 0.3 | 0.0 | 4.8 | 3.2 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 13.8 | 0.0 | 6.7 | 7.6 | 0.0 | 9.9 | 25.5 | 0.0 | 0.0 | 29.5 | 0.0 | 0.0 |
| LnGrp LOS | B | A | A | A | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 279 | | | 619 | | | 213 | | | 330 | |
| Approach Delay, s/veh | | 9.6 | | | 9.7 | | | 25.5 | | | 29.5 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 51.1 | | 23.9 | | 51.1 | | 23.9 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 32.5 | | * 31 | | 32.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 20.4 | | 16.2 | | 14.8 | | 10.1 | | | | |
| Green Ext Time (p_c), s | | 1.4 | | 1.8 | | 3.8 | | 1.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 16.6 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build
 108: Alta Vista Rd & Lexington Rd

HCM 6th Signalized Intersection Summary
 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 1 | 448 | 44 | 35 | 622 | 0 | 75 | 10 | 69 | 2 | 3 | 1 |
| Future Volume (veh/h) | 1 | 448 | 44 | 35 | 622 | 0 | 75 | 10 | 69 | 2 | 3 | 1 |
| 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 | 1900 | 1870 | 1826 | 1856 | 1870 | 1900 | 1900 | 1900 | 1826 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 1 | 509 | 50 | 40 | 707 | 0 | 85 | 11 | 78 | 2 | 3 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 0 | 2 | 5 | 3 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Cap, veh/h | 449 | 1040 | 102 | 539 | 1161 | 0 | 217 | 32 | 109 | 155 | 179 | 46 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.00 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 753 | 1676 | 165 | 844 | 1870 | 0 | 656 | 206 | 700 | 331 | 1151 | 296 |
| Grp Volume(v), veh/h | 1 | 0 | 559 | 40 | 707 | 0 | 174 | 0 | 0 | 6 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 753 | 0 | 1841 | 844 | 1870 | 0 | 1561 | 0 | 0 | 1777 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 7.7 | 1.3 | 10.7 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 10.7 | 0.0 | 7.7 | 8.9 | 10.7 | 0.0 | 4.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.09 | 1.00 | | 0.00 | 0.49 | | 0.45 | 0.33 | | 0.17 |
| Lane Grp Cap(c), veh/h | 449 | 0 | 1142 | 539 | 1161 | 0 | 358 | 0 | 0 | 380 | 0 | 0 |
| V/C Ratio(X) | 0.00 | 0.00 | 0.49 | 0.07 | 0.61 | 0.00 | 0.49 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 449 | 0 | 1142 | 539 | 1161 | 0 | 807 | 0 | 0 | 854 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 8.7 | 0.0 | 4.8 | 7.2 | 5.4 | 0.0 | 18.6 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 1.5 | 0.3 | 2.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 2.1 | 0.2 | 3.1 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.7 | 0.0 | 6.3 | 7.5 | 7.8 | 0.0 | 18.9 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 560 | | | 747 | | | 174 | | | | 6 |
| Approach Delay, s/veh | | 6.3 | | | 7.7 | | | 18.9 | | | | 16.6 |
| Approach LOS | | A | | | A | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.0 | | 12.4 | | 34.0 | | 12.4 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 29 | | * 21 | | * 29 | | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | | 12.7 | | 6.9 | | 12.7 | | 2.1 | | | | |
| Green Ext Time (p_c), s | | 5.3 | | 0.5 | | 7.2 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 8.5 | | | | | | | | |
| HCM 6th LOS | | | | A | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build
 104: Etley Ave & Lexington Rd

HCM 6th TWSC
 07/19/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑ | | | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 172 | 85 | 12 | 544 | 102 | 64 |
| Future Vol, veh/h | 172 | 85 | 12 | 544 | 102 | 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 | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 3 | 0 | 0 | 1 | 2 | 0 |
| Mvmt Flow | 189 | 93 | 13 | 598 | 112 | 70 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 282 | 0 | 860 |
| Stage 1 | - | - | - | - | 236 |
| Stage 2 | - | - | - | - | 624 |
| Critical Hdwy | - | - | 4.1 | - | 6.63 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.83 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 |
| Follow-up Hdwy | - | - | 2.2 | - | 3.519 |
| Pot Cap-1 Maneuver | - | - | 1292 | - | 310 |
| Stage 1 | - | - | - | - | 782 |
| Stage 2 | - | - | - | - | 533 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1292 | - | 305 |
| Mov Cap-2 Maneuver | - | - | - | - | 416 |
| Stage 1 | - | - | - | - | 782 |
| Stage 2 | - | - | - | - | 525 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.2 | 13.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 416 | 888 | - | - | 1292 | - |
| HCM Lane V/C Ratio | 0.269 | 0.079 | - | - | 0.01 | - |
| HCM Control Delay (s) | 16.8 | 9.4 | - | - | 7.8 | 0 |
| HCM Lane LOS | C | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.1 | 0.3 | - | - | 0 | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM No Build
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/19/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | ↘ | ↗ | ↕ | ↕ |
| Traffic Vol, veh/h | 4 | 85 | 161 | 1180 | 982 | 85 |
| Future Vol, veh/h | 4 | 85 | 161 | 1180 | 982 | 85 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 50 | 0 | 0 | - | - | - |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 25 | 0 | 3 | 2 | 2 | 7 |
| Mvmt Flow | 5 | 97 | 183 | 1341 | 1116 | 97 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 2872 | 607 | 1213 | 0 | - | 0 |
| Stage 1 | 1165 | - | - | - | - | - |
| Stage 2 | 1707 | - | - | - | - | - |
| Critical Hdwy | 6.975 | 6.9 | 4.145 | - | - | - |
| Critical Hdwy Stg 1 | 6.175 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.775 | - | - | - | - | - |
| Follow-up Hdwy | 3.7375 | 3.32 | 2.285 | - | - | - |
| Pot Cap-1 Maneuver | 12 | 444 | 568 | - | - | - |
| Stage 1 | 225 | - | - | - | - | - |
| Stage 2 | 133 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 8 | 444 | 568 | - | - | - |
| Mov Cap-2 Maneuver | 69 | - | - | - | - | - |
| Stage 1 | 153 | - | - | - | - | - |
| Stage 2 | 133 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.3 | 1.7 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 568 | - | 69 | 444 | - | - |
| HCM Lane V/C Ratio | 0.322 | - | 0.066 | 0.218 | - | - |
| HCM Control Delay (s) | 14.3 | - | 60.8 | 15.3 | - | - |
| HCM Lane LOS | B | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 1.4 | - | 0.2 | 0.8 | - | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 784 | 178 | 184 | 224 | 303 | 0 | 0 | 557 | 170 |
| Future Volume (veh/h) | 0 | 0 | 0 | 784 | 178 | 184 | 224 | 303 | 0 | 0 | 557 | 170 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | | No | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1870 | 1826 | 0 | 0 | 1870 | 1900 |
| Adj Flow Rate, veh/h | | | | 912 | 207 | 214 | 260 | 352 | 0 | 0 | 648 | 0 |
| Peak Hour Factor | | | | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 2 | 5 | 0 | 0 | 2 | 0 |
| Cap, veh/h | | | | 840 | 397 | 411 | 270 | 1349 | 0 | 0 | 948 | |
| Arrive On Green | | | | 0.47 | 0.47 | 0.47 | 0.02 | 0.13 | 0.00 | 0.00 | 0.27 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 849 | 878 | 1781 | 3561 | 0 | 0 | 3647 | 1610 |
| Grp Volume(v), veh/h | | | | 912 | 0 | 421 | 260 | 352 | 0 | 0 | 648 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1795 | 0 | 1727 | 1781 | 1735 | 0 | 0 | 1777 | 1610 |
| Q Serve(g_s), s | | | | 42.1 | 0.0 | 15.4 | 5.5 | 8.2 | 0.0 | 0.0 | 14.7 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 42.1 | 0.0 | 15.4 | 5.5 | 8.2 | 0.0 | 0.0 | 14.7 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.51 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 840 | 0 | 808 | 270 | 1349 | 0 | 0 | 948 | |
| V/C Ratio(X) | | | | 1.09 | 0.00 | 0.52 | 0.96 | 0.26 | 0.00 | 0.00 | 0.68 | |
| Avail Cap(c_a), veh/h | | | | 840 | 0 | 808 | 270 | 1349 | 0 | 0 | 948 | |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.96 | 0.96 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 24.0 | 0.0 | 16.9 | 32.2 | 27.6 | 0.0 | 0.0 | 29.6 | 0.0 |
| Incr Delay (d2), s/veh | | | | 57.0 | 0.0 | 1.2 | 43.7 | 0.5 | 0.0 | 0.0 | 4.0 | 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 |
| %ile BackOfQ(50%),veh/ln | | | | 29.7 | 0.0 | 6.1 | 6.3 | 3.7 | 0.0 | 0.0 | 6.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 81.0 | 0.0 | 18.0 | 76.0 | 28.0 | 0.0 | 0.0 | 33.6 | 0.0 |
| LnGrp LOS | | | | F | A | B | E | C | A | A | C | |
| Approach Vol, veh/h | | | | | 1333 | | | 612 | | | 648 | |
| Approach Delay, s/veh | | | | | 61.1 | | | 48.4 | | | 33.6 | |
| Approach LOS | | | | | E | | | D | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 41.0 | | 49.0 | 11.0 | 30.0 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 35.0 | | * 42 | * 5.5 | 24.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 10.2 | | 44.1 | 7.5 | 16.7 | | | | | | |
| Green Ext Time (p_c), s | | 0.9 | | 0.0 | 0.0 | 1.2 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 51.2 | | | | | | | | |
| HCM 6th LOS | | | | D | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM 6th Signalized Intersection Summary
 102: Grinstead Dr & I-64 EB Ramp 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|-------|------|------|-----|-----|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | ↗ | | | | | ↕↕ | ↗ | ↖ | ↕↕ | |
| Traffic Volume (veh/h) | 89 | 0 | 385 | 0 | 0 | 0 | 0 | 453 | 706 | 203 | 1088 | 0 |
| Future Volume (veh/h) | 89 | 0 | 385 | 0 | 0 | 0 | 0 | 453 | 706 | 203 | 1088 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | | No |
| Adj Sat Flow, veh/h/ln | 1781 | 1900 | 1841 | | | | 0 | 1856 | 1870 | 1856 | 1885 | 0 |
| Adj Flow Rate, veh/h | 105 | 0 | 0 | | | | 0 | 533 | 0 | 239 | 1280 | 0 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | | | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Percent Heavy Veh, % | 8 | 0 | 4 | | | | 0 | 3 | 2 | 3 | 1 | 0 |
| Cap, veh/h | 137 | 0 | | | | | 0 | 2227 | | 691 | 2761 | 0 |
| Arrive On Green | 0.08 | 0.00 | 0.00 | | | | 0.00 | 0.63 | 0.00 | 0.07 | 0.77 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1560 | | | | 0 | 3618 | 1585 | 1767 | 3676 | 0 |
| Grp Volume(v), veh/h | 105 | 0 | 0 | | | | 0 | 533 | 0 | 239 | 1280 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1560 | | | | 0 | 1763 | 1585 | 1767 | 1791 | 0 |
| Q Serve(g_s), s | 5.1 | 0.0 | 0.0 | | | | 0.0 | 5.9 | 0.0 | 3.9 | 11.5 | 0.0 |
| Cycle Q Clear(g_c), s | 5.1 | 0.0 | 0.0 | | | | 0.0 | 5.9 | 0.0 | 3.9 | 11.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 137 | 0 | | | | | 0 | 2227 | | 691 | 2761 | 0 |
| V/C Ratio(X) | 0.76 | 0.00 | | | | | 0.00 | 0.24 | | 0.35 | 0.46 | 0.00 |
| Avail Cap(c_a), veh/h | 292 | 0 | | | | | 0 | 2227 | | 799 | 2761 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.10 | 0.00 | 0.26 | 0.26 | 0.00 |
| Uniform Delay (d), s/veh | 40.8 | 0.0 | 0.0 | | | | 0.0 | 7.2 | 0.0 | 4.5 | 3.7 | 0.0 |
| Incr Delay (d2), s/veh | 8.5 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.6 | 0.0 | 0.0 | | | | 0.0 | 2.0 | 0.0 | 1.1 | 2.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 49.3 | 0.0 | 0.0 | | | | 0.0 | 7.2 | 0.0 | 4.5 | 3.8 | 0.0 |
| LnGrp LOS | D | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 105 | | | | | | 533 | | | 1519 | |
| Approach Delay, s/veh | | 49.3 | | | | | | 7.2 | | | 3.9 | |
| Approach LOS | | D | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.5 | 64.1 | | | | 76.7 | | 13.3 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | * 12 | 43.7 | | | | 61.7 | | 14.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 5.9 | 7.9 | | | | 13.5 | | 7.1 | | | | |
| Green Ext Time (p_c), s | 0.3 | 4.0 | | | | 13.7 | | 0.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 7.0 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↖↗ | | ↖↗ | ↖ | ↗ | | ↖↗ | ↖ | ↗ | ↖↗ | ↖↗ |
| Traffic Volume (veh/h) | 208 | 98 | 1 | 247 | 227 | 37 | 0 | 919 | 286 | 118 | 867 | 484 |
| Future Volume (veh/h) | 208 | 98 | 1 | 247 | 227 | 37 | 0 | 919 | 286 | 118 | 867 | 484 |
| 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 | 1870 | 1900 | 1856 | 1885 | 1781 | 0 | 1870 | 1870 | 1885 | 1870 | 1841 |
| Adj Flow Rate, veh/h | 231 | 109 | 1 | 274 | 252 | 41 | 0 | 1021 | 318 | 131 | 963 | 538 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 4 | 2 | 0 | 3 | 1 | 8 | 0 | 2 | 2 | 1 | 2 | 4 |
| Cap, veh/h | 245 | 450 | 4 | 588 | 323 | 259 | 0 | 1064 | 746 | 144 | 1023 | 556 |
| Arrive On Green | 0.12 | 0.12 | 0.12 | 0.17 | 0.17 | 0.17 | 0.00 | 0.30 | 0.30 | 0.08 | 0.46 | 0.46 |
| Sat Flow, veh/h | 1963 | 3608 | 33 | 3428 | 1885 | 1510 | 0 | 3647 | 1585 | 1795 | 2222 | 1208 |
| Grp Volume(v), veh/h | 231 | 54 | 56 | 274 | 252 | 41 | 0 | 1021 | 318 | 131 | 765 | 736 |
| Grp Sat Flow(s), veh/h/ln | 982 | 1777 | 1864 | 1714 | 1885 | 1510 | 0 | 1777 | 1585 | 1795 | 1777 | 1653 |
| Q Serve(g_s), s | 10.2 | 2.4 | 2.4 | 6.3 | 11.2 | 2.0 | 0.0 | 24.7 | 11.6 | 6.3 | 35.6 | 37.9 |
| Cycle Q Clear(g_c), s | 10.2 | 2.4 | 2.4 | 6.3 | 11.2 | 2.0 | 0.0 | 24.7 | 11.6 | 6.3 | 35.6 | 37.9 |
| Prop In Lane | 1.00 | | 0.02 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.73 |
| Lane Grp Cap(c), veh/h | 245 | 221 | 232 | 588 | 323 | 259 | 0 | 1064 | 746 | 144 | 818 | 761 |
| V/C Ratio(X) | 0.94 | 0.24 | 0.24 | 0.47 | 0.78 | 0.16 | 0.00 | 0.96 | 0.43 | 0.91 | 0.93 | 0.97 |
| Avail Cap(c_a), veh/h | 245 | 221 | 232 | 741 | 407 | 326 | 0 | 1064 | 746 | 144 | 821 | 763 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 38.0 | 34.6 | 34.6 | 32.6 | 34.7 | 30.9 | 0.0 | 30.1 | 15.3 | 39.9 | 22.3 | 23.0 |
| Incr Delay (d2), s/veh | 41.9 | 0.2 | 0.2 | 0.6 | 7.4 | 0.3 | 0.0 | 18.5 | 0.1 | 49.6 | 17.3 | 24.6 |
| 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 | 3.8 | 1.0 | 1.1 | 2.6 | 5.7 | 0.7 | 0.0 | 12.7 | 5.6 | 4.7 | 17.6 | 18.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 79.9 | 34.8 | 34.8 | 33.2 | 42.0 | 31.1 | 0.0 | 48.7 | 15.5 | 89.6 | 39.6 | 47.5 |
| LnGrp LOS | E | C | C | C | D | C | A | D | B | F | D | D |
| Approach Vol, veh/h | | 341 | | | 567 | | | 1339 | | | 1632 | |
| Approach Delay, s/veh | | 65.3 | | | 37.0 | | | 40.8 | | | 47.2 | |
| Approach LOS | | E | | | D | | | D | | | D | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 18.0 | 14.1 | 33.3 | | 22.1 | | 47.4 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 10.9 | 7.0 | 24.8 | | 18.9 | | * 40 | | | | |
| Max Q Clear Time (g_c+I1), s | | 12.2 | 8.3 | 26.7 | | 13.2 | | 39.9 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.0 | | 1.4 | | 0.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 45.1 | | | | | | | | |
| HCM 6th LOS | | | | D | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM Signalized Intersection Capacity Analysis
 106: Grinstead Dr & Cherokee Pkwy 07/20/2022

| | ↶ | ↷ | ↘ | ↙ | ↵ | ↶ |
|-----------------------------------|------|-------|-------|------|---------------------------|------|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | | ↶ | ↶↷ | | ↶ | ↶ |
| Traffic Volume (vph) | 0 | 666 | 747 | 15 | 400 | 709 |
| Future Volume (vph) | 0 | 666 | 747 | 15 | 400 | 709 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 0.95 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1611 | 3564 | | 1770 | 1881 |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1611 | 3564 | | 1863 | 1881 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 0 | 748 | 839 | 17 | 449 | 797 |
| RTOR Reduction (vph) | 0 | 56 | 2 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 692 | 854 | 0 | 449 | 797 |
| Heavy Vehicles (%) | 0% | 2% | 1% | 0% | 2% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 32.5 | 36.5 | | 69.0 | 80.0 |
| Effective Green, g (s) | | 32.5 | 36.5 | | 69.0 | 80.0 |
| Actuated g/C Ratio | | 0.41 | 0.46 | | 0.86 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 654 | 1626 | | 1569 | 1881 |
| v/s Ratio Prot | | | c0.24 | | 0.12 | 0.42 |
| v/s Ratio Perm | | c0.43 | | | 0.13 | |
| v/c Ratio | | 1.06 | 0.53 | | 0.29 | 0.42 |
| Uniform Delay, d1 | | 23.8 | 15.6 | | 7.8 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 51.4 | 1.2 | | 0.1 | 0.7 |
| Delay (s) | | 75.1 | 16.8 | | 7.9 | 0.7 |
| Level of Service | | E | B | | A | A |
| Approach Delay (s) | 75.1 | | 16.8 | | | 3.3 |
| Approach LOS | E | | B | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 26.2 | | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | | | 0.78 | | | |
| Actuated Cycle Length (s) | | | 80.0 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 71.5% | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study



















26 AM Build
 107: Payne St & Lexington Rd

HCM 6th Signalized Intersection Summary
 07/19/2022

| | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|-------|------|------|------|-------|------|------|------|------|
| | | | | | | | | | | | | |
| Lane Configurations | | ↔ | | ↔ | ↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 87 | 192 | 3 | 58 | 514 | 5 | 3 | 131 | 60 | 4 | 139 | 126 |
| Future Volume (veh/h) | 87 | 192 | 3 | 58 | 514 | 5 | 3 | 131 | 60 | 4 | 139 | 126 |
| 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 | 1870 | 1900 | 1870 | 1885 | 1900 | 1900 | 1796 | 1856 | 1900 | 1796 | 1870 |
| Adj Flow Rate, veh/h | 102 | 226 | 4 | 68 | 605 | 6 | 4 | 154 | 71 | 5 | 164 | 148 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Percent Heavy Veh, % | 5 | 2 | 0 | 2 | 1 | 0 | 0 | 7 | 3 | 0 | 7 | 2 |
| Cap, veh/h | 390 | 1136 | 21 | 745 | 1146 | 11 | 51 | 270 | 122 | 51 | 202 | 179 |
| Arrive On Green | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 497 | 1848 | 34 | 1151 | 1863 | 18 | 8 | 1167 | 528 | 8 | 873 | 772 |
| Grp Volume(v), veh/h | 135 | 0 | 197 | 68 | 0 | 611 | 229 | 0 | 0 | 317 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 684 | 0 | 1696 | 1151 | 0 | 1882 | 1703 | 0 | 0 | 1653 | 0 | 0 |
| Q Serve(g_s), s | 5.7 | 0.0 | 3.8 | 2.1 | 0.0 | 13.9 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 19.5 | 0.0 | 3.8 | 5.8 | 0.0 | 13.9 | 9.0 | 0.0 | 0.0 | 13.6 | 0.0 | 0.0 |
| Prop In Lane | 0.76 | | 0.02 | 1.00 | | 0.01 | 0.02 | | 0.31 | 0.02 | | 0.47 |
| Lane Grp Cap(c), veh/h | 505 | 0 | 1043 | 745 | 0 | 1157 | 443 | 0 | 0 | 432 | 0 | 0 |
| V/C Ratio(X) | 0.27 | 0.00 | 0.19 | 0.09 | 0.00 | 0.53 | 0.52 | 0.00 | 0.00 | 0.73 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 505 | 0 | 1043 | 745 | 0 | 1157 | 749 | 0 | 0 | 730 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 11.8 | 0.0 | 6.3 | 7.6 | 0.0 | 8.2 | 25.6 | 0.0 | 0.0 | 27.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.3 | 0.0 | 0.4 | 0.2 | 0.0 | 1.7 | 0.9 | 0.0 | 0.0 | 2.4 | 0.0 | 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 | 1.5 | 0.0 | 1.3 | 0.5 | 0.0 | 5.2 | 3.6 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 13.1 | 0.0 | 6.7 | 7.8 | 0.0 | 10.0 | 26.5 | 0.0 | 0.0 | 29.8 | 0.0 | 0.0 |
| LnGrp LOS | B | A | A | A | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 332 | | | 679 | | | 229 | | | 317 | |
| Approach Delay, s/veh | | 9.3 | | | 9.7 | | | 26.5 | | | 29.8 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 51.7 | | 23.3 | | 51.7 | | 23.3 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 32.5 | | * 31 | | 32.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 21.5 | | 15.6 | | 15.9 | | 11.0 | | | | |
| Green Ext Time (p_c), s | | 1.7 | | 1.7 | | 4.1 | | 1.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 16.2 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |





















One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM 6th Signalized Intersection Summary
 108: Alta Vista Rd & Lexington Rd 07/19/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  | |
| Traffic Volume (veh/h) | 1 | 461 | 45 | 35 | 645 | 0 | 78 | 10 | 69 | 2 | 3 | 1 |
| Future Volume (veh/h) | 1 | 461 | 45 | 35 | 645 | 0 | 78 | 10 | 69 | 2 | 3 | 1 |
| 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 | 1900 | 1870 | 1826 | 1856 | 1870 | 1900 | 1900 | 1900 | 1826 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 1 | 524 | 51 | 40 | 733 | 0 | 89 | 11 | 78 | 2 | 3 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 0 | 2 | 5 | 3 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Cap, veh/h | 431 | 1040 | 101 | 527 | 1160 | 0 | 222 | 31 | 107 | 155 | 180 | 46 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.00 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 735 | 1678 | 163 | 831 | 1870 | 0 | 677 | 198 | 683 | 333 | 1152 | 297 |
| Grp Volume(v), veh/h | 1 | 0 | 575 | 40 | 733 | 0 | 178 | 0 | 0 | 6 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 735 | 0 | 1841 | 831 | 1870 | 0 | 1558 | 0 | 0 | 1781 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.0 | 1.3 | 11.4 | 0.0 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.4 | 0.0 | 8.0 | 9.3 | 11.4 | 0.0 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.09 | 1.00 | | 0.00 | 0.50 | | 0.44 | 0.33 | | 0.17 |
| Lane Grp Cap(c), veh/h | 431 | 0 | 1141 | 527 | 1160 | 0 | 360 | 0 | 0 | 382 | 0 | 0 |
| V/C Ratio(X) | 0.00 | 0.00 | 0.50 | 0.08 | 0.63 | 0.00 | 0.50 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 431 | 0 | 1141 | 527 | 1160 | 0 | 806 | 0 | 0 | 854 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 9.1 | 0.0 | 4.9 | 7.5 | 5.5 | 0.0 | 18.6 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 1.6 | 0.3 | 2.6 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 2.2 | 0.2 | 3.3 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 9.1 | 0.0 | 6.5 | 7.7 | 8.1 | 0.0 | 19.0 | 0.0 | 0.0 | 16.6 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 576 | | | 773 | | | 178 | | | | 6 |
| Approach Delay, s/veh | | 6.5 | | | 8.1 | | | 19.0 | | | | 16.6 |
| Approach LOS | | A | | | A | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.0 | | 12.5 | | 34.0 | | 12.5 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 29 | | * 21 | | * 29 | | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | | 13.4 | | 7.0 | | 13.4 | | 2.1 | | | | |
| Green Ext Time (p_c), s | | 5.3 | | 0.5 | | 7.3 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 8.8 | | | | | | | | |
| HCM 6th LOS | | | | A | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build HCM 6th Signalized Intersection Summary
 104: Etley Ave & Lexington Rd 07/22/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 51 | 172 | 85 | 12 | 558 | 26 | 102 | 77 | 61 | 69 | 42 | 14 |
| Future Volume (veh/h) | 51 | 172 | 85 | 12 | 558 | 26 | 102 | 77 | 61 | 69 | 42 | 14 |
| 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 | 1900 | 1856 | 1900 | 1900 | 1885 | 1900 | 1870 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 56 | 189 | 93 | 13 | 613 | 29 | 112 | 85 | 67 | 76 | 46 | 15 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 0 | 3 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 532 | 810 | 399 | 813 | 1233 | 58 | 303 | 170 | 134 | 228 | 237 | 77 |
| Arrive On Green | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 800 | 1174 | 578 | 1115 | 1786 | 84 | 1341 | 984 | 776 | 1255 | 1372 | 447 |
| Grp Volume(v), veh/h | 56 | 0 | 282 | 13 | 0 | 642 | 112 | 0 | 152 | 76 | 0 | 61 |
| Grp Sat Flow(s),veh/h/ln | 800 | 0 | 1752 | 1115 | 0 | 1870 | 1341 | 0 | 1760 | 1255 | 0 | 1819 |
| Q Serve(g_s), s | 2.3 | 0.0 | 3.9 | 0.3 | 0.0 | 10.7 | 5.1 | 0.0 | 5.2 | 3.8 | 0.0 | 1.9 |
| Cycle Q Clear(g_c), s | 13.0 | 0.0 | 3.9 | 4.2 | 0.0 | 10.7 | 7.0 | 0.0 | 5.2 | 9.0 | 0.0 | 1.9 |
| Prop In Lane | 1.00 | | 0.33 | 1.00 | | 0.05 | 1.00 | | 0.44 | 1.00 | | 0.25 |
| Lane Grp Cap(c), veh/h | 532 | 0 | 1209 | 813 | 0 | 1291 | 303 | 0 | 305 | 228 | 0 | 315 |
| V/C Ratio(X) | 0.11 | 0.00 | 0.23 | 0.02 | 0.00 | 0.50 | 0.37 | 0.00 | 0.50 | 0.33 | 0.00 | 0.19 |
| Avail Cap(c_a), veh/h | 532 | 0 | 1209 | 813 | 0 | 1291 | 590 | 0 | 681 | 497 | 0 | 704 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.9 | 0.0 | 3.8 | 4.5 | 0.0 | 4.8 | 26.3 | 0.0 | 24.7 | 28.7 | 0.0 | 23.3 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.5 | 0.0 | 0.0 | 1.4 | 0.8 | 0.0 | 1.3 | 0.8 | 0.0 | 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 | 0.0 | 1.1 | 0.1 | 0.0 | 3.2 | 1.6 | 0.0 | 2.1 | 1.2 | 0.0 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.3 | 0.0 | 4.2 | 4.6 | 0.0 | 6.2 | 27.1 | 0.0 | 25.9 | 29.6 | 0.0 | 23.6 |
| LnGrp LOS | A | A | A | A | A | A | C | A | C | C | A | C |
| Approach Vol, veh/h | | 338 | | | 655 | | | 264 | | | 137 | |
| Approach Delay, s/veh | | 4.9 | | | 6.1 | | | 26.4 | | | 26.9 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 50.0 | | 15.9 | | 50.0 | | 15.9 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 45.5 | | 25.5 | | 45.5 | | 25.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.0 | | 11.0 | | 12.7 | | 9.0 | | | | |
| Green Ext Time (p_c), s | | 2.2 | | 0.4 | | 5.1 | | 1.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 11.7 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

26 AM Build
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/19/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | ↘ | ↗ | ↕ | ↕ |
| Traffic Vol, veh/h | 4 | 127 | 238 | 1180 | 982 | 85 |
| Future Vol, veh/h | 4 | 127 | 238 | 1180 | 982 | 85 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 50 | 0 | 0 | - | - | - |
| Veh in Median Storage, # | 1 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 25 | 0 | 3 | 2 | 2 | 0 |
| Mvmt Flow | 5 | 144 | 270 | 1341 | 1116 | 97 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 3046 | 607 | 1213 | 0 | - | 0 |
| Stage 1 | 1165 | - | - | - | - | - |
| Stage 2 | 1881 | - | - | - | - | - |
| Critical Hdwy | 6.975 | 6.9 | 4.145 | - | - | - |
| Critical Hdwy Stg 1 | 6.175 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.775 | - | - | - | - | - |
| Follow-up Hdwy | 3.7375 | 3.32 | 2.285 | - | - | - |
| Pot Cap-1 Maneuver | 9 | 444 | 568 | - | - | - |
| Stage 1 | 225 | - | - | - | - | - |
| Stage 2 | 107 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 5 | 444 | 568 | - | - | - |
| Mov Cap-2 Maneuver | 53 | - | - | - | - | - |
| Stage 1 | 118 | - | - | - | - | - |
| Stage 2 | 107 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.9 | 2.8 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 568 | - | 53 | 444 | - | - |
| HCM Lane V/C Ratio | 0.476 | - | 0.086 | 0.325 | - | - |
| HCM Control Delay (s) | 17 | - | 79.2 | 17 | - | - |
| HCM Lane LOS | C | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 2.6 | - | 0.3 | 1.4 | - | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 683 | 166 | 185 | 162 | 301 | 0 | 0 | 353 | 112 |
| Future Volume (veh/h) | 0 | 0 | 0 | 683 | 166 | 185 | 162 | 301 | 0 | 0 | 353 | 112 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | | | No | | No | | No | | No | | No |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1856 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 704 | 171 | 191 | 167 | 310 | 0 | 0 | 364 | 0 |
| Peak Hour Factor | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | | | | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 810 | 361 | 403 | 467 | 1659 | 0 | 0 | 1266 | |
| Arrive On Green | | | | 0.45 | 0.45 | 0.45 | 0.15 | 0.93 | 0.00 | 0.00 | 0.35 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 800 | 894 | 1795 | 3676 | 0 | 0 | 3676 | 1610 |
| Grp Volume(v), veh/h | | | | 704 | 0 | 362 | 167 | 310 | 0 | 0 | 364 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1795 | 0 | 1695 | 1795 | 1791 | 0 | 0 | 1791 | 1610 |
| Q Serve(g_s), s | | | | 53.1 | 0.0 | 22.4 | 8.8 | 1.2 | 0.0 | 0.0 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 53.1 | 0.0 | 22.4 | 8.8 | 1.2 | 0.0 | 0.0 | 11.0 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.53 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 810 | 0 | 764 | 467 | 1659 | 0 | 0 | 1266 | |
| V/C Ratio(X) | | | | 0.87 | 0.00 | 0.47 | 0.36 | 0.19 | 0.00 | 0.00 | 0.29 | |
| Avail Cap(c_a), veh/h | | | | 1019 | 0 | 961 | 516 | 1659 | 0 | 0 | 1266 | |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.99 | 0.99 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 37.2 | 0.0 | 28.8 | 24.6 | 3.0 | 0.0 | 0.0 | 34.9 | 0.0 |
| Incr Delay (d2), s/veh | | | | 8.6 | 0.0 | 1.0 | 0.3 | 0.2 | 0.0 | 0.0 | 0.6 | 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 |
| %ile BackOfQ(50%),veh/ln | | | | 25.1 | 0.0 | 9.4 | 3.5 | 0.5 | 0.0 | 0.0 | 5.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 45.8 | 0.0 | 29.7 | 24.9 | 3.3 | 0.0 | 0.0 | 35.5 | 0.0 |
| LnGrp LOS | | | | D | A | C | C | A | A | A | D | |
| Approach Vol, veh/h | | | | | 1066 | | | 477 | | | 364 | |
| Approach Delay, s/veh | | | | | 40.4 | | | 10.8 | | | 35.5 | |
| Approach LOS | | | | | D | | | B | | | D | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 75.5 | | 74.5 | 16.5 | 59.0 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 52.0 | | * 85 | * 15 | 31.4 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 3.2 | | 55.1 | 10.8 | 13.0 | | | | | | |
| Green Ext Time (p_c), s | | 0.8 | | 12.5 | 0.1 | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.0 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |






















One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak HCM 6th Signalized Intersection Summary
 102: Grinstead Dr & I-64 EB Ramp 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|-------|-------|------|-----|-----|-------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | ↗ | | | | | ↕ | ↗ | ↖ | ↕ | |
| Traffic Volume (veh/h) | 84 | 0 | 315 | 0 | 0 | 0 | 0 | 379 | 675 | 142 | 895 | 0 |
| Future Volume (veh/h) | 84 | 0 | 315 | 0 | 0 | 0 | 0 | 379 | 675 | 142 | 895 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1885 | | | | 0 | 1885 | 1885 | 1900 | 1885 | 0 |
| Adj Flow Rate, veh/h | 87 | 0 | 0 | | | | 0 | 391 | 0 | 146 | 923 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 0 | 1 | | | | 0 | 1 | 1 | 0 | 1 | 0 |
| Cap, veh/h | 111 | 0 | | | | | 0 | 2763 | | 886 | 3033 | 0 |
| Arrive On Green | 0.06 | 0.00 | 0.00 | | | | 0.00 | 1.00 | 0.00 | 0.07 | 1.00 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1598 | | | | 0 | 3676 | 1598 | 1810 | 3676 | 0 |
| Grp Volume(v), veh/h | 87 | 0 | 0 | | | | 0 | 391 | 0 | 146 | 923 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1598 | | | | 0 | 1791 | 1598 | 1810 | 1791 | 0 |
| Q Serve(g_s), s | 7.1 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.1 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 111 | 0 | | | | | 0 | 2763 | | 886 | 3033 | 0 |
| V/C Ratio(X) | 0.78 | 0.00 | | | | | 0.00 | 0.14 | | 0.16 | 0.30 | 0.00 |
| Avail Cap(c_a), veh/h | 320 | 0 | | | | | 0 | 2763 | | 931 | 3033 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.67 | 1.67 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.69 | 0.00 | 0.73 | 0.73 | 0.00 |
| Uniform Delay (d), s/veh | 69.4 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 2.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 11.4 | 0.0 | 0.0 | | | | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.7 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.7 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 80.8 | 0.0 | 0.0 | | | | 0.0 | 0.1 | 0.0 | 2.7 | 0.2 | 0.0 |
| LnGrp LOS | F | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 87 | | | | | | 391 | | | 1069 | |
| Approach Delay, s/veh | | 80.8 | | | | | | 0.1 | | | 0.5 | |
| Approach LOS | | F | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.3 | 123.0 | | | | 134.3 | | 15.7 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | * 8.7 | 94.7 | | | | 109.7 | | 26.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 2.0 | | | | 2.0 | | 9.1 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.9 | | | | 8.5 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 4.9 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |











One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  | |  |  |  |  | |
| Traffic Volume (veh/h) | 272 | 306 | 6 | 279 | 142 | 59 | 0 | 803 | 279 | 149 | 805 | 160 |
| Future Volume (veh/h) | 272 | 306 | 6 | 279 | 142 | 59 | 0 | 803 | 279 | 149 | 805 | 160 |
| 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 | 1159 | 1870 | 1885 | 1900 | 0 | 1870 | 1885 | 1900 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 275 | 309 | 6 | 282 | 143 | 60 | 0 | 811 | 282 | 151 | 813 | 162 |
| Peak Hour Factor | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Percent Heavy Veh, % | 1 | 1 | 50 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 1 |
| Cap, veh/h | 311 | 622 | 12 | 347 | 189 | 162 | 0 | 1651 | 903 | 131 | 1740 | 347 |
| Arrive On Green | 0.17 | 0.17 | 0.17 | 0.10 | 0.10 | 0.10 | 0.00 | 0.46 | 0.46 | 0.02 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1795 | 3594 | 70 | 3456 | 1885 | 1610 | 0 | 3647 | 1598 | 1810 | 2976 | 593 |
| Grp Volume(v), veh/h | 275 | 154 | 161 | 282 | 143 | 60 | 0 | 811 | 282 | 151 | 489 | 486 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 1791 | 1873 | 1728 | 1885 | 1610 | 0 | 1777 | 1598 | 1810 | 1791 | 1778 |
| Q Serve(g_s), s | 22.4 | 11.7 | 11.7 | 12.0 | 11.1 | 5.2 | 0.0 | 23.7 | 14.0 | 10.9 | 36.3 | 36.3 |
| Cycle Q Clear(g_c), s | 22.4 | 11.7 | 11.7 | 12.0 | 11.1 | 5.2 | 0.0 | 23.7 | 14.0 | 10.9 | 36.3 | 36.3 |
| Prop In Lane | 1.00 | | 0.04 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.33 |
| Lane Grp Cap(c), veh/h | 311 | 310 | 324 | 347 | 189 | 162 | 0 | 1651 | 903 | 131 | 1047 | 1040 |
| V/C Ratio(X) | 0.89 | 0.50 | 0.50 | 0.81 | 0.75 | 0.37 | 0.00 | 0.49 | 0.31 | 1.15 | 0.47 | 0.47 |
| Avail Cap(c_a), veh/h | 561 | 560 | 586 | 458 | 250 | 214 | 0 | 1651 | 903 | 131 | 1047 | 1040 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.88 | 0.88 | 0.88 |
| Uniform Delay (d), s/veh | 60.6 | 56.1 | 56.1 | 66.1 | 65.7 | 63.0 | 0.0 | 27.9 | 17.2 | 73.2 | 39.8 | 39.8 |
| Incr Delay (d2), s/veh | 3.4 | 0.5 | 0.4 | 8.1 | 8.9 | 1.4 | 0.0 | 1.0 | 0.9 | 119.1 | 1.3 | 1.3 |
| 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 | 10.5 | 5.3 | 5.6 | 5.7 | 5.8 | 2.2 | 0.0 | 10.3 | 6.8 | 9.7 | 18.0 | 17.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 64.0 | 56.6 | 56.6 | 74.2 | 74.6 | 64.4 | 0.0 | 28.9 | 18.1 | 192.3 | 41.1 | 41.1 |
| LnGrp LOS | E | E | E | E | E | E | A | C | B | F | D | D |
| Approach Vol, veh/h | | 590 | | | 485 | | | 1093 | | | 1126 | |
| Approach Delay, s/veh | | 60.0 | | | 73.1 | | | 26.1 | | | 61.4 | |
| Approach LOS | | E | | | E | | | C | | | E | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 33.0 | 18.0 | 76.8 | | 22.2 | | 94.8 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 46.9 | 10.9 | 43.9 | | 19.9 | | * 63 | | | | |
| Max Q Clear Time (g_c+1), s | | 24.4 | 12.9 | 25.7 | | 14.0 | | 38.3 | | | | |
| Green Ext Time (p_c), s | | 1.5 | 0.0 | 4.1 | | 1.1 | | 4.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 51.2 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study




















2022 PM Peak HCM Signalized Intersection Capacity Analysis
 106: Grinstead Dr & Cherokee Pkwy 07/20/2022

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | |  |  | |  |  |
| Traffic Volume (vph) | 0 | 490 | 533 | 7 | 616 | 648 |
| Future Volume (vph) | 0 | 490 | 533 | 7 | 616 | 648 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 0.95 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1627 | 3561 | | 1787 | 1881 |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1627 | 3561 | | 1881 | 1881 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 0 | 495 | 538 | 7 | 622 | 655 |
| RTOR Reduction (vph) | 0 | 237 | 1 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 258 | 544 | 0 | 622 | 655 |
| Heavy Vehicles (%) | 0% | 1% | 1% | 14% | 1% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 17.4 | 44.8 | | 62.2 | 73.2 |
| Effective Green, g (s) | | 17.4 | 44.8 | | 62.2 | 73.2 |
| Actuated g/C Ratio | | 0.24 | 0.61 | | 0.85 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 386 | 2179 | | 1575 | 1881 |
| v/s Ratio Prot | | | 0.15 | | 0.09 | 0.35 |
| v/s Ratio Perm | | c0.16 | | | c0.24 | |
| v/c Ratio | | 0.67 | 0.25 | | 0.39 | 0.35 |
| Uniform Delay, d1 | | 25.3 | 6.5 | | 13.0 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 4.5 | 0.3 | | 0.2 | 0.5 |
| Delay (s) | | 29.8 | 6.8 | | 13.2 | 0.5 |
| Level of Service | | C | A | | B | A |
| Approach Delay (s) | 29.8 | | 6.8 | | | 6.7 |
| Approach LOS | C | | A | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 11.6 | | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | | | 0.47 | | | |
| Actuated Cycle Length (s) | | | 73.2 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 58.7% | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak
 107: Payne St & Lexington Rd

HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 189 | 604 | 124 | 59 | 212 | 3 | 3 | 156 | 90 | 14 | 156 | 132 |
| Future Volume (veh/h) | 189 | 604 | 124 | 59 | 212 | 3 | 3 | 156 | 90 | 14 | 156 | 132 |
| 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 | 1900 | 1900 | 1900 | 1900 | 1648 | 1900 | 1900 | 1900 | 1885 | 1856 |
| Adj Flow Rate, veh/h | 201 | 643 | 132 | 63 | 226 | 3 | 3 | 166 | 96 | 15 | 166 | 140 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 1 | 3 |
| Cap, veh/h | 760 | 948 | 195 | 341 | 1168 | 16 | 49 | 254 | 145 | 58 | 211 | 170 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1161 | 1518 | 312 | 707 | 1871 | 25 | 5 | 1133 | 647 | 37 | 942 | 757 |
| Grp Volume(v), veh/h | 201 | 0 | 775 | 63 | 0 | 229 | 265 | 0 | 0 | 321 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 1161 | 0 | 1829 | 707 | 0 | 1896 | 1785 | 0 | 0 | 1737 | 0 | 0 |
| Q Serve(g_s), s | 6.8 | 0.0 | 21.0 | 4.8 | 0.0 | 3.9 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 10.7 | 0.0 | 21.0 | 25.8 | 0.0 | 3.9 | 10.3 | 0.0 | 0.0 | 13.3 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.17 | 1.00 | | 0.01 | 0.01 | | 0.36 | 0.05 | | 0.44 |
| Lane Grp Cap(c), veh/h | 760 | 0 | 1143 | 341 | 0 | 1184 | 448 | 0 | 0 | 439 | 0 | 0 |
| V/C Ratio(X) | 0.26 | 0.00 | 0.68 | 0.18 | 0.00 | 0.19 | 0.59 | 0.00 | 0.00 | 0.73 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 760 | 0 | 1143 | 341 | 0 | 1184 | 773 | 0 | 0 | 750 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 8.4 | 0.0 | 9.3 | 17.7 | 0.0 | 6.1 | 26.9 | 0.0 | 0.0 | 28.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 3.2 | 1.2 | 0.0 | 0.4 | 1.2 | 0.0 | 0.0 | 2.4 | 0.0 | 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 | 1.7 | 0.0 | 7.8 | 0.9 | 0.0 | 1.4 | 4.4 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 9.2 | 0.0 | 12.5 | 18.9 | 0.0 | 6.5 | 28.1 | 0.0 | 0.0 | 30.4 | 0.0 | 0.0 |
| LnGrp LOS | A | A | B | B | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 976 | | | 292 | | | 265 | | | 321 | |
| Approach Delay, s/veh | | 11.9 | | | 9.1 | | | 28.1 | | | 30.4 | |
| Approach LOS | | B | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 53.1 | | 22.9 | | 53.1 | | 22.9 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 47.5 | | * 31 | | 47.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 23.0 | | 15.3 | | 27.8 | | 12.3 | | | | |
| Green Ext Time (p_c), s | | 7.2 | | 1.8 | | 1.7 | | 1.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 17.0 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak HCM 6th Signalized Intersection Summary
 108: Alta Vista Rd & Lexington Rd 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 5 | 631 | 118 | 63 | 587 | 0 | 65 | 7 | 53 | 4 | 12 | 3 |
| Future Volume (veh/h) | 5 | 631 | 118 | 63 | 587 | 0 | 65 | 7 | 53 | 4 | 12 | 3 |
| 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 | 1900 | 1885 | 1900 | 1870 | 1885 | 1900 | 1870 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 5 | 678 | 127 | 68 | 631 | 0 | 70 | 8 | 57 | 4 | 13 | 3 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 0 | 1 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 513 | 974 | 182 | 384 | 1189 | 0 | 215 | 35 | 97 | 113 | 205 | 40 |
| Arrive On Green | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.00 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 808 | 1544 | 289 | 677 | 1885 | 0 | 665 | 235 | 657 | 142 | 1384 | 269 |
| Grp Volume(v), veh/h | 5 | 0 | 805 | 68 | 631 | 0 | 135 | 0 | 0 | 20 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 808 | 0 | 1833 | 677 | 1885 | 0 | 1557 | 0 | 0 | 1795 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 13.6 | 3.5 | 8.7 | 0.0 | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.9 | 0.0 | 13.6 | 17.0 | 8.7 | 0.0 | 3.7 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.16 | 1.00 | | 0.00 | 0.52 | | 0.42 | 0.20 | | 0.15 |
| Lane Grp Cap(c), veh/h | 513 | 0 | 1156 | 384 | 1189 | 0 | 347 | 0 | 0 | 357 | 0 | 0 |
| V/C Ratio(X) | 0.01 | 0.00 | 0.70 | 0.18 | 0.53 | 0.00 | 0.39 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 513 | 0 | 1156 | 384 | 1189 | 0 | 769 | 0 | 0 | 835 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.3 | 0.0 | 5.7 | 11.3 | 4.8 | 0.0 | 18.6 | 0.0 | 0.0 | 17.2 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 3.5 | 1.0 | 1.7 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 3.9 | 0.5 | 2.4 | 0.0 | 1.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.3 | 0.0 | 9.2 | 12.3 | 6.5 | 0.0 | 18.8 | 0.0 | 0.0 | 17.3 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | B | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 810 | | | 699 | | | 135 | | | | 20 |
| Approach Delay, s/veh | | 9.2 | | | 7.1 | | | 18.8 | | | | 17.3 |
| Approach LOS | | A | | | A | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.8 | | 12.1 | | 34.8 | | 12.1 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 30 | | * 20 | | * 30 | | * 20 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.6 | | 5.7 | | 19.0 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 7.5 | | 0.4 | | 5.1 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 9.2 | | | | | | | | |
| HCM 6th LOS | | | | A | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak
 104: Etley Ave & Lexington Rd

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 604 | 124 | 4 | 314 | 57 | 9 |
| Future Vol, veh/h | 604 | 124 | 4 | 314 | 57 | 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 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 629 | 129 | 4 | 327 | 59 | 9 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 758 | 0 | 1029 |
| Stage 1 | - | - | - | - | 694 |
| Stage 2 | - | - | - | - | 335 |
| Critical Hdwy | - | - | 4.1 | - | 6.6 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.8 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 |
| Pot Cap-1 Maneuver | - | - | 862 | - | 247 |
| Stage 1 | - | - | - | - | 462 |
| Stage 2 | - | - | - | - | 729 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 862 | - | 246 |
| Mov Cap-2 Maneuver | - | - | - | - | 246 |
| Stage 1 | - | - | - | - | 462 |
| Stage 2 | - | - | - | - | 725 |

| Approach | EB | WB | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0 | 0.1 | 23 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 268 | - | - | 862 | - |
| HCM Lane V/C Ratio | 0.257 | - | - | 0.005 | - |
| HCM Control Delay (s) | 23 | - | - | 9.2 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1 | - | - | 0 | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2022 PM Peak
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | Y | | ↑↑ | | ↑↓ | |
| Traffic Vol, veh/h | 2 | 134 | 62 | 966 | 1130 | 13 |
| Future Vol, veh/h | 2 | 134 | 62 | 966 | 1130 | 13 |
| 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 | 99 | 99 | 99 | 99 | 99 | 99 |
| Heavy Vehicles, % | 0 | 0 | 0 | 1 | 1 | 0 |
| Mvmt Flow | 2 | 135 | 63 | 976 | 1141 | 13 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1762 | 577 | 1154 | 0 | - | 0 |
| Stage 1 | 1148 | - | - | - | - | - |
| Stage 2 | 614 | - | - | - | - | - |
| Critical Hdwy | 6.8 | 6.9 | 4.1 | - | - | - |
| Critical Hdwy Stg 1 | 5.8 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.8 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - | - |
| Pot Cap-1 Maneuver | *186 | *609 | *915 | - | - | - |
| Stage 1 | *575 | - | - | - | - | - |
| Stage 2 | *508 | - | - | - | - | - |
| Platoon blocked, % | 1 | 1 | 1 | - | - | - |
| Mov Cap-1 Maneuver | *158 | *609 | *915 | - | - | - |
| Mov Cap-2 Maneuver | *158 | - | - | - | - | - |
| Stage 1 | *489 | - | - | - | - | - |
| Stage 2 | *508 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.1 | 1.1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | *915 | - | 584 | - | - |
| HCM Lane V/C Ratio | 0.068 | - | 0.235 | - | - |
| HCM Control Delay (s) | 9.2 | 0.6 | 13.1 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 0.9 | - | - |

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

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study













2026 PM No Build HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 720 | 173 | 193 | 220 | 327 | 0 | 0 | 374 | 117 |
| Future Volume (veh/h) | 0 | 0 | 0 | 720 | 173 | 193 | 220 | 327 | 0 | 0 | 374 | 117 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | | No | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1856 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 742 | 178 | 199 | 227 | 337 | 0 | 0 | 386 | 0 |
| Peak Hour Factor | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | | | | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 849 | 378 | 423 | 440 | 1558 | 0 | 0 | 1072 | |
| Arrive On Green | | | | 0.47 | 0.47 | 0.47 | 0.19 | 0.87 | 0.00 | 0.00 | 0.30 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 800 | 894 | 1795 | 3676 | 0 | 0 | 3676 | 1610 |
| Grp Volume(v), veh/h | | | | 742 | 0 | 377 | 227 | 337 | 0 | 0 | 386 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1795 | 0 | 1695 | 1795 | 1791 | 0 | 0 | 1791 | 1610 |
| Q Serve(g_s), s | | | | 52.0 | 0.0 | 21.1 | 12.5 | 2.1 | 0.0 | 0.0 | 11.8 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 52.0 | 0.0 | 21.1 | 12.5 | 2.1 | 0.0 | 0.0 | 11.8 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.53 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 849 | 0 | 801 | 440 | 1558 | 0 | 0 | 1072 | |
| V/C Ratio(X) | | | | 0.87 | 0.00 | 0.47 | 0.52 | 0.22 | 0.00 | 0.00 | 0.36 | |
| Avail Cap(c_a), veh/h | | | | 1014 | 0 | 957 | 440 | 1558 | 0 | 0 | 1072 | |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.99 | 0.99 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 33.2 | 0.0 | 25.0 | 25.8 | 5.3 | 0.0 | 0.0 | 38.5 | 0.0 |
| Incr Delay (d2), s/veh | | | | 9.0 | 0.0 | 0.9 | 0.8 | 0.3 | 0.0 | 0.0 | 0.9 | 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 |
| %ile BackOfQ(50%),veh/ln | | | | 24.4 | 0.0 | 8.8 | 4.7 | 0.8 | 0.0 | 0.0 | 5.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 42.2 | 0.0 | 25.9 | 26.6 | 5.6 | 0.0 | 0.0 | 39.5 | 0.0 |
| LnGrp LOS | | | | D | A | C | C | A | A | A | D | |
| Approach Vol, veh/h | | | | | 1119 | | | 564 | | | 386 | |
| Approach Delay, s/veh | | | | | 36.7 | | | 14.1 | | | 39.5 | |
| Approach LOS | | | | | D | | | B | | | D | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 66.9 | | 73.1 | 19.0 | 47.9 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 48.0 | | * 79 | * 14 | 29.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 4.1 | | 54.0 | 14.5 | 13.8 | | | | | | |
| Green Ext Time (p_c), s | | 0.9 | | 12.2 | 0.0 | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | 31.0 | | | | | | | |
| HCM 6th LOS | | | | | C | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study























2026 PM No Build
 102: Grinstead Dr & I-64 EB Ramp

HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | ↗ | | | | | ↕↕ | ↗ | ↖ | ↕↕ | |
| Traffic Volume (veh/h) | 87 | 0 | 337 | 0 | 0 | 0 | 0 | 429 | 723 | 148 | 947 | 0 |
| Future Volume (veh/h) | 87 | 0 | 337 | 0 | 0 | 0 | 0 | 429 | 723 | 148 | 947 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1885 | | | | 0 | 1885 | 1885 | 1900 | 1885 | 0 |
| Adj Flow Rate, veh/h | 90 | 0 | 0 | | | | 0 | 442 | 0 | 153 | 976 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 0 | 1 | | | | 0 | 1 | 1 | 0 | 1 | 0 |
| Cap, veh/h | 115 | 0 | | | | | 0 | 2720 | | 814 | 3009 | 0 |
| Arrive On Green | 0.06 | 0.00 | 0.00 | | | | 0.00 | 0.76 | 0.00 | 0.07 | 1.00 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1598 | | | | 0 | 3676 | 1598 | 1810 | 3676 | 0 |
| Grp Volume(v), veh/h | 90 | 0 | 0 | | | | 0 | 442 | 0 | 153 | 976 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1598 | | | | 0 | 1791 | 1598 | 1810 | 1791 | 0 |
| Q Serve(g_s), s | 6.9 | 0.0 | 0.0 | | | | 0.0 | 4.7 | 0.0 | 2.6 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 6.9 | 0.0 | 0.0 | | | | 0.0 | 4.7 | 0.0 | 2.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 115 | 0 | | | | | 0 | 2720 | | 814 | 3009 | 0 |
| V/C Ratio(X) | 0.78 | 0.00 | | | | | 0.00 | 0.16 | | 0.19 | 0.32 | 0.00 |
| Avail Cap(c_a), veh/h | 308 | 0 | | | | | 0 | 2720 | | 857 | 3009 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.65 | 0.00 | 0.68 | 0.68 | 0.00 |
| Uniform Delay (d), s/veh | 64.6 | 0.0 | 0.0 | | | | 0.0 | 4.6 | 0.0 | 2.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 10.9 | 0.0 | 0.0 | | | | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.5 | 0.0 | 0.0 | | | | 0.0 | 1.7 | 0.0 | 0.7 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 75.5 | 0.0 | 0.0 | | | | 0.0 | 4.7 | 0.0 | 3.0 | 0.2 | 0.0 |
| LnGrp LOS | E | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 90 | | | | | | 442 | | | 1129 | |
| Approach Delay, s/veh | | 75.5 | | | | | | 4.7 | | | 0.6 | |
| Approach LOS | | E | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.3 | 113.6 | | | | 124.9 | | 15.1 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.3 | 88.1 | | | | 102.7 | | 23.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 6.7 | | | | 2.0 | | 8.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 3.4 | | | | 9.3 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 5.7 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  | |  |  |  |  |  |
| Traffic Volume (veh/h) | 349 | 345 | 6 | 297 | 148 | 61 | 0 | 836 | 290 | 155 | 860 | 169 |
| Future Volume (veh/h) | 349 | 345 | 6 | 297 | 148 | 61 | 0 | 836 | 290 | 155 | 860 | 169 |
| 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 | 1159 | 1870 | 1885 | 1900 | 0 | 1870 | 1885 | 1900 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 353 | 348 | 6 | 300 | 149 | 62 | 0 | 844 | 293 | 157 | 869 | 171 |
| Peak Hour Factor | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Percent Heavy Veh, % | 1 | 1 | 50 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 1 |
| Cap, veh/h | 395 | 707 | 12 | 370 | 202 | 173 | 0 | 1403 | 802 | 179 | 1624 | 320 |
| Arrive On Green | 0.20 | 0.20 | 0.20 | 0.11 | 0.11 | 0.11 | 0.00 | 0.39 | 0.39 | 0.20 | 1.00 | 1.00 |
| Sat Flow, veh/h | 2011 | 3603 | 62 | 3456 | 1885 | 1610 | 0 | 3647 | 1598 | 1810 | 2983 | 587 |
| Grp Volume(v), veh/h | 353 | 173 | 181 | 300 | 149 | 62 | 0 | 844 | 293 | 157 | 522 | 518 |
| Grp Sat Flow(s),veh/h/ln | 1005 | 1791 | 1874 | 1728 | 1885 | 1610 | 0 | 1777 | 1598 | 1810 | 1791 | 1780 |
| Q Serve(g_s), s | 24.0 | 12.0 | 12.0 | 11.9 | 10.7 | 5.0 | 0.0 | 26.4 | 15.7 | 11.8 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 24.0 | 12.0 | 12.0 | 11.9 | 10.7 | 5.0 | 0.0 | 26.4 | 15.7 | 11.8 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.33 |
| Lane Grp Cap(c), veh/h | 395 | 351 | 368 | 370 | 202 | 173 | 0 | 1403 | 802 | 179 | 975 | 969 |
| V/C Ratio(X) | 0.89 | 0.49 | 0.49 | 0.81 | 0.74 | 0.36 | 0.00 | 0.60 | 0.37 | 0.88 | 0.53 | 0.54 |
| Avail Cap(c_a), veh/h | 516 | 459 | 481 | 392 | 214 | 183 | 0 | 1403 | 802 | 206 | 975 | 969 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.86 | 0.86 | 0.86 |
| Uniform Delay (d), s/veh | 54.8 | 50.0 | 50.1 | 61.1 | 60.6 | 58.0 | 0.0 | 33.6 | 21.3 | 55.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 12.8 | 0.4 | 0.4 | 11.5 | 11.9 | 1.3 | 0.0 | 1.9 | 1.3 | 26.2 | 1.8 | 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 | 6.7 | 5.4 | 5.7 | 5.8 | 5.8 | 2.1 | 0.0 | 11.7 | 7.6 | 6.1 | 0.5 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 67.6 | 50.4 | 50.4 | 72.6 | 72.5 | 59.3 | 0.0 | 35.6 | 22.6 | 81.5 | 1.8 | 1.8 |
| LnGrp LOS | E | D | D | E | E | E | A | D | C | F | A | A |
| Approach Vol, veh/h | | 707 | | | 511 | | | 1137 | | | 1197 | |
| Approach Delay, s/veh | | 59.0 | | | 71.0 | | | 32.2 | | | 12.3 | |
| Approach LOS | | E | | | E | | | C | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.6 | 21.0 | 62.4 | | 22.1 | | 83.3 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 35.9 | 15.9 | 43.9 | | 15.9 | | * 68 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.0 | 13.8 | 28.4 | | 13.9 | | 2.0 | | | | |
| Green Ext Time (p_c), s | | 1.5 | 0.1 | 4.1 | | 0.5 | | 4.8 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 36.4 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study




















2026 PM No Build HCM Signalized Intersection Capacity Analysis
 106: Grinstead Dr & Cherokee Pkwy 07/20/2022

| | ↶ | ↷ | ↘ | ↙ | ↵ | ↶ |
|-----------------------------------|------|-------|-------|------|---------------------------|------|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Volume (vph) | 0 | 517 | 567 | 7 | 645 | 702 |
| Future Volume (vph) | 0 | 517 | 567 | 7 | 645 | 702 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Fl _t Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1627 | 1875 | | 1787 | 1881 |
| Fl _t Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1627 | 1875 | | 1881 | 1881 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 0 | 522 | 573 | 7 | 652 | 709 |
| RTOR Reduction (vph) | 0 | 214 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 308 | 580 | 0 | 652 | 709 |
| Heavy Vehicles (%) | 0% | 1% | 1% | 14% | 1% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 18.8 | 44.8 | | 63.6 | 74.6 |
| Effective Green, g (s) | | 18.8 | 44.8 | | 63.6 | 74.6 |
| Actuated g/C Ratio | | 0.25 | 0.60 | | 0.85 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 410 | 1126 | | 1579 | 1881 |
| v/s Ratio Prot | | | c0.31 | | 0.10 | 0.38 |
| v/s Ratio Perm | | c0.19 | | | 0.25 | |
| v/c Ratio | | 0.75 | 0.51 | | 0.41 | 0.38 |
| Uniform Delay, d ₁ | | 25.7 | 8.6 | | 12.8 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d ₂ | | 7.8 | 1.7 | | 0.2 | 0.6 |
| Delay (s) | | 33.6 | 10.3 | | 13.0 | 0.6 |
| Level of Service | | C | B | | B | A |
| Approach Delay (s) | 33.6 | | 10.3 | | | 6.5 |
| Approach LOS | C | | B | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 13.1 | | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | | | 0.58 | | | |
| Actuated Cycle Length (s) | | | 74.6 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 75.1% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build
 107: Payne St & Lexington Rd




















HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 197 | 438 | 2 | 65 | 245 | 4 | 3 | 162 | 97 | 15 | 162 | 137 |
| Future Volume (veh/h) | 197 | 438 | 2 | 65 | 245 | 4 | 3 | 162 | 97 | 15 | 162 | 137 |
| 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 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1870 |
| Adj Flow Rate, veh/h | 210 | 466 | 2 | 69 | 261 | 4 | 3 | 172 | 103 | 16 | 172 | 146 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Cap, veh/h | 716 | 1152 | 5 | 553 | 1146 | 18 | 50 | 260 | 153 | 59 | 218 | 176 |
| Arrive On Green | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1123 | 1876 | 8 | 940 | 1866 | 29 | 5 | 1117 | 660 | 38 | 940 | 759 |
| Grp Volume(v), veh/h | 210 | 0 | 468 | 69 | 0 | 265 | 278 | 0 | 0 | 334 | 0 | 0 |
| Grp Sat Flow(s), veh/h/ln | 1123 | 0 | 1884 | 940 | 0 | 1895 | 1782 | 0 | 0 | 1737 | 0 | 0 |
| Q Serve(g_s), s | 7.7 | 0.0 | 9.6 | 3.1 | 0.0 | 4.7 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 12.4 | 0.0 | 9.6 | 12.6 | 0.0 | 4.7 | 10.6 | 0.0 | 0.0 | 13.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.02 | 0.01 | | 0.37 | 0.05 | | 0.44 |
| Lane Grp Cap(c), veh/h | 716 | 0 | 1157 | 553 | 0 | 1164 | 463 | 0 | 0 | 454 | 0 | 0 |
| V/C Ratio(X) | 0.29 | 0.00 | 0.40 | 0.12 | 0.00 | 0.23 | 0.60 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 716 | 0 | 1157 | 553 | 0 | 1164 | 783 | 0 | 0 | 761 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 9.3 | 0.0 | 7.4 | 10.7 | 0.0 | 6.5 | 26.2 | 0.0 | 0.0 | 27.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.0 | 0.0 | 1.1 | 0.5 | 0.0 | 0.5 | 1.3 | 0.0 | 0.0 | 2.3 | 0.0 | 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 | 1.9 | 0.0 | 3.5 | 0.7 | 0.0 | 1.7 | 4.5 | 0.0 | 0.0 | 5.7 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 10.3 | 0.0 | 8.5 | 11.1 | 0.0 | 6.9 | 27.4 | 0.0 | 0.0 | 29.6 | 0.0 | 0.0 |
| LnGrp LOS | B | A | A | B | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 678 | | | 334 | | | 278 | | | 334 | |
| Approach Delay, s/veh | | 9.0 | | | 7.8 | | | 27.4 | | | 29.6 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 51.7 | | 23.3 | | 51.7 | | 23.3 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 32.5 | | * 31 | | 32.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 14.4 | | 15.6 | | 14.6 | | 12.6 | | | | |
| Green Ext Time (p_c), s | | 3.7 | | 1.8 | | 1.7 | | 1.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 16.2 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build
 108: Alta Vista Rd & Lexington Rd

HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 5 | 670 | 124 | 66 | 617 | 0 | 69 | 7 | 55 | 4 | 12 | 3 |
| Future Volume (veh/h) | 5 | 670 | 124 | 66 | 617 | 0 | 69 | 7 | 55 | 4 | 12 | 3 |
| 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 | 1900 | 1885 | 1900 | 1870 | 1885 | 1900 | 1870 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 5 | 720 | 133 | 71 | 663 | 0 | 74 | 8 | 59 | 4 | 13 | 3 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 0 | 1 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 485 | 965 | 178 | 347 | 1176 | 0 | 221 | 34 | 98 | 115 | 209 | 41 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.00 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 784 | 1548 | 286 | 647 | 1885 | 0 | 677 | 226 | 650 | 141 | 1385 | 269 |
| Grp Volume(v), veh/h | 5 | 0 | 853 | 71 | 663 | 0 | 141 | 0 | 0 | 20 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 784 | 0 | 1834 | 647 | 1885 | 0 | 1554 | 0 | 0 | 1795 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 15.1 | 4.0 | 9.4 | 0.0 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.6 | 0.0 | 15.1 | 19.1 | 9.4 | 0.0 | 3.8 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.16 | 1.00 | | 0.00 | 0.52 | | 0.42 | 0.20 | | 0.15 |
| Lane Grp Cap(c), veh/h | 485 | 0 | 1143 | 347 | 1176 | 0 | 354 | 0 | 0 | 365 | 0 | 0 |
| V/C Ratio(X) | 0.01 | 0.00 | 0.75 | 0.20 | 0.56 | 0.00 | 0.40 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 485 | 0 | 1143 | 347 | 1176 | 0 | 807 | 0 | 0 | 878 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.8 | 0.0 | 6.1 | 12.9 | 5.0 | 0.0 | 18.2 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 4.5 | 1.3 | 2.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 4.5 | 0.6 | 2.6 | 0.0 | 1.3 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.9 | 0.0 | 10.6 | 14.2 | 7.0 | 0.0 | 18.5 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 |
| LnGrp LOS | A | A | B | B | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 858 | | | 734 | | | 141 | | | 20 | |
| Approach Delay, s/veh | | 10.6 | | | 7.7 | | | 18.5 | | | 16.8 | |
| Approach LOS | | B | | | A | | | B | | | B | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.0 | | 12.2 | | 34.0 | | 12.2 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 29 | | * 21 | | * 29 | | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.1 | | 5.8 | | 21.1 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 7.0 | | 0.4 | | 4.2 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 10.1 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↕ | ↕ |
| Traffic Vol, veh/h | 2 | 177 | 114 | 976 | 1178 | 37 |
| Future Vol, veh/h | 2 | 177 | 114 | 976 | 1178 | 37 |
| 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 | 0 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 99 | 99 | 99 | 99 | 99 | 99 |
| Heavy Vehicles, % | 0 | 0 | 0 | 1 | 1 | 0 |
| Mvmt Flow | 2 | 179 | 115 | 986 | 1190 | 37 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 2425 | 614 | 1227 | 0 | 0 |
| Stage 1 | 1209 | - | - | - | - |
| Stage 2 | 1216 | - | - | - | - |
| Critical Hdwy | 6.6 | 6.9 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.8 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 31 | 440 | 575 | - | - |
| Stage 1 | 249 | - | - | - | - |
| Stage 2 | 283 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 25 | 440 | 575 | - | - |
| Mov Cap-2 Maneuver | 25 | - | - | - | - |
| Stage 1 | 199 | - | - | - | - |
| Stage 2 | 283 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.3 | 1.3 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 575 | - | 25 | 440 | - | - |
| HCM Lane V/C Ratio | 0.2 | - | 0.081 | 0.406 | - | - |
| HCM Control Delay (s) | 12.8 | - | 161.3 | 18.7 | - | - |
| HCM Lane LOS | B | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 0.7 | - | 0.2 | 1.9 | - | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↕ | ↕ |
| Traffic Vol, veh/h | 2 | 177 | 114 | 976 | 1178 | 37 |
| Future Vol, veh/h | 2 | 177 | 114 | 976 | 1178 | 37 |
| 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 | 0 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 99 | 99 | 99 | 99 | 99 | 99 |
| Heavy Vehicles, % | 0 | 0 | 0 | 1 | 1 | 0 |
| Mvmt Flow | 2 | 179 | 115 | 986 | 1190 | 37 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 2425 | 614 | 1227 | 0 | 0 |
| Stage 1 | 1209 | - | - | - | - |
| Stage 2 | 1216 | - | - | - | - |
| Critical Hdwy | 6.6 | 6.9 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.8 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 31 | 440 | 575 | - | - |
| Stage 1 | 249 | - | - | - | - |
| Stage 2 | 283 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 25 | 440 | 575 | - | - |
| Mov Cap-2 Maneuver | 25 | - | - | - | - |
| Stage 1 | 199 | - | - | - | - |
| Stage 2 | 283 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 20.3 | 1.3 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 575 | - | 25 | 440 | - | - |
| HCM Lane V/C Ratio | 0.2 | - | 0.081 | 0.406 | - | - |
| HCM Control Delay (s) | 12.8 | - | 161.3 | 18.7 | - | - |
| HCM Lane LOS | B | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 0.7 | - | 0.2 | 1.9 | - | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM No Build
 104: Etley Ave & Lexington Rd

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑ | | | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 635 | 136 | 11 | 314 | 101 | 120 |
| Future Vol, veh/h | 635 | 136 | 11 | 314 | 101 | 120 |
| 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 | 100 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 91 | 91 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 661 | 142 | 11 | 327 | 111 | 132 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 803 | 0 | 1081 |
| Stage 1 | - | - | - | - | 732 |
| Stage 2 | - | - | - | - | 349 |
| Critical Hdwy | - | - | 4.1 | - | 6.6 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.8 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 |
| Pot Cap-1 Maneuver | - | - | 830 | - | 229 |
| Stage 1 | - | - | - | - | 442 |
| Stage 2 | - | - | - | - | 719 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 830 | - | 225 |
| Mov Cap-2 Maneuver | - | - | - | - | 342 |
| Stage 1 | - | - | - | - | 442 |
| Stage 2 | - | - | - | - | 707 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.3 | 16.2 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 342 | 604 | - | - | 830 | - |
| HCM Lane V/C Ratio | 0.325 | 0.218 | - | - | 0.014 | - |
| HCM Control Delay (s) | 20.5 | 12.6 | - | - | 9.4 | 0 |
| HCM Lane LOS | C | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.4 | 0.8 | - | - | 0 | - |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build HCM 6th Signalized Intersection Summary
 101: Grinstead Dr & I-64 WB Ramp 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|-----|------|-----|-------|-------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | ↖ | ↗ | | | ↗ | ↖ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 755 | 173 | 193 | 268 | 359 | 0 | 0 | 397 | 117 |
| Future Volume (veh/h) | 0 | 0 | 0 | 755 | 173 | 193 | 268 | 359 | 0 | 0 | 397 | 117 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | | | No | | No | | No | | No | | No |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1856 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 778 | 178 | 199 | 276 | 370 | 0 | 0 | 409 | 0 |
| Peak Hour Factor | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | | | | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 879 | 392 | 438 | 412 | 1498 | 0 | 0 | 1012 | |
| Arrive On Green | | | | 0.49 | 0.49 | 0.49 | 0.19 | 0.84 | 0.00 | 0.00 | 0.28 | 0.00 |
| Sat Flow, veh/h | | | | 1795 | 800 | 894 | 1795 | 3676 | 0 | 0 | 3676 | 1610 |
| Grp Volume(v), veh/h | | | | 778 | 0 | 377 | 276 | 370 | 0 | 0 | 409 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1795 | 0 | 1695 | 1795 | 1791 | 0 | 0 | 1791 | 1610 |
| Q Serve(g_s), s | | | | 54.6 | 0.0 | 20.4 | 13.5 | 3.0 | 0.0 | 0.0 | 12.9 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 54.6 | 0.0 | 20.4 | 13.5 | 3.0 | 0.0 | 0.0 | 12.9 | 0.0 |
| Prop In Lane | | | | 1.00 | | 0.53 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 879 | 0 | 830 | 412 | 1498 | 0 | 0 | 1012 | |
| V/C Ratio(X) | | | | 0.89 | 0.00 | 0.45 | 0.67 | 0.25 | 0.00 | 0.00 | 0.40 | |
| Avail Cap(c_a), veh/h | | | | 1014 | 0 | 957 | 412 | 1498 | 0 | 0 | 1012 | |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.98 | 0.98 | 0.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 32.2 | 0.0 | 23.5 | 30.8 | 6.9 | 0.0 | 0.0 | 40.7 | 0.0 |
| Incr Delay (d2), s/veh | | | | 9.9 | 0.0 | 0.8 | 3.8 | 0.4 | 0.0 | 0.0 | 1.2 | 0.0 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 25.7 | 0.0 | 8.4 | 6.5 | 1.1 | 0.0 | 0.0 | 5.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 42.1 | 0.0 | 24.3 | 34.6 | 7.3 | 0.0 | 0.0 | 41.9 | 0.0 |
| LnGrp LOS | | | | D | A | C | C | A | A | A | D | |
| Approach Vol, veh/h | | | | | 1155 | | | 646 | | | 409 | |
| Approach Delay, s/veh | | | | | 36.3 | | | 18.9 | | | 41.9 | |
| Approach LOS | | | | | D | | | B | | | D | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | | 64.6 | | 75.4 | 19.0 | 45.6 | | | | | | |
| Change Period (Y+Rc), s | | 6.0 | | * 6.9 | * 5.5 | 6.0 | | | | | | |
| Max Green Setting (Gmax), s | | 48.0 | | * 79 | * 14 | 29.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | | 5.0 | | 56.6 | 15.5 | 14.9 | | | | | | |
| Green Ext Time (p_c), s | | 1.0 | | 11.9 | 0.0 | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.3 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 102: Grinstead Dr & I-64 EB Ramp

HCM 6th Signalized Intersection Summary
 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|-------|-------|------|-----|-----|-------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | ↗ | | | | | ↕↕ | ↗ | ↖ | ↕↕ | |
| Traffic Volume (veh/h) | 87 | 0 | 372 | 0 | 0 | 0 | 0 | 509 | 771 | 148 | 1005 | 0 |
| Future Volume (veh/h) | 87 | 0 | 372 | 0 | 0 | 0 | 0 | 509 | 771 | 148 | 1005 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | | No |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1885 | | | | 0 | 1885 | 1885 | 1900 | 1885 | 0 |
| Adj Flow Rate, veh/h | 90 | 0 | 0 | | | | 0 | 525 | 0 | 153 | 1036 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 0 | 1 | | | | 0 | 1 | 1 | 0 | 1 | 0 |
| Cap, veh/h | 115 | 0 | | | | | 0 | 2720 | | 756 | 3009 | 0 |
| Arrive On Green | 0.06 | 0.00 | 0.00 | | | | 0.00 | 0.76 | 0.00 | 0.07 | 1.00 | 0.00 |
| Sat Flow, veh/h | 1810 | 0 | 1598 | | | | 0 | 3676 | 1598 | 1810 | 3676 | 0 |
| Grp Volume(v), veh/h | 90 | 0 | 0 | | | | 0 | 525 | 0 | 153 | 1036 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1810 | 0 | 1598 | | | | 0 | 1791 | 1598 | 1810 | 1791 | 0 |
| Q Serve(g_s), s | 6.9 | 0.0 | 0.0 | | | | 0.0 | 5.8 | 0.0 | 2.6 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 6.9 | 0.0 | 0.0 | | | | 0.0 | 5.8 | 0.0 | 2.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 115 | 0 | | | | | 0 | 2720 | | 756 | 3009 | 0 |
| V/C Ratio(X) | 0.78 | 0.00 | | | | | 0.00 | 0.19 | | 0.20 | 0.34 | 0.00 |
| Avail Cap(c_a), veh/h | 308 | 0 | | | | | 0 | 2720 | | 799 | 3009 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.00 | 0.50 | 0.00 | 0.63 | 0.63 | 0.00 |
| Uniform Delay (d), s/veh | 64.6 | 0.0 | 0.0 | | | | 0.0 | 4.8 | 0.0 | 2.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 10.9 | 0.0 | 0.0 | | | | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.5 | 0.0 | 0.0 | | | | 0.0 | 2.0 | 0.0 | 0.7 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 75.5 | 0.0 | 0.0 | | | | 0.0 | 4.8 | 0.0 | 3.0 | 0.2 | 0.0 |
| LnGrp LOS | E | A | | | | | A | A | | A | A | A |
| Approach Vol, veh/h | | 90 | | | | | | 525 | | | 1189 | |
| Approach Delay, s/veh | | 75.5 | | | | | | 4.8 | | | 0.6 | |
| Approach LOS | | E | | | | | | A | | | A | |
| Timer - Assigned Phs | 1 | 2 | | | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.3 | 113.6 | | | | 124.9 | | 15.1 | | | | |
| Change Period (Y+Rc), s | * 6.3 | 7.3 | | | | 7.3 | | 6.2 | | | | |
| Max Green Setting (Gmax), s | * 8.3 | 88.1 | | | | 102.7 | | 23.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 7.8 | | | | 2.0 | | 8.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 4.1 | | | | 10.2 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 5.5 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |
| Unsignalized delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study











2026 PM Peak Build HCM 6th Signalized Intersection Summary
 103: Grinstead Dr & Lexington Rd 07/20/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖↗ | ↖↗ | | ↖↗ | ↖ | ↗ | | ↖↗ | ↖ | ↗ | ↖↗ | |
| Traffic Volume (veh/h) | 477 | 377 | 5 | 297 | 171 | 61 | 0 | 836 | 290 | 155 | 860 | 262 |
| Future Volume (veh/h) | 477 | 377 | 5 | 297 | 171 | 61 | 0 | 836 | 290 | 155 | 860 | 262 |
| 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 | 1159 | 1870 | 1885 | 1900 | 0 | 1870 | 1885 | 1900 | 1885 | 1885 |
| Adj Flow Rate, veh/h | 482 | 381 | 5 | 300 | 173 | 62 | 0 | 844 | 293 | 157 | 869 | 265 |
| Peak Hour Factor | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Percent Heavy Veh, % | 1 | 1 | 50 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 1 |
| Cap, veh/h | 507 | 913 | 12 | 370 | 202 | 173 | 0 | 1210 | 715 | 181 | 1328 | 405 |
| Arrive On Green | 0.25 | 0.25 | 0.25 | 0.11 | 0.11 | 0.11 | 0.00 | 0.34 | 0.34 | 0.13 | 0.65 | 0.65 |
| Sat Flow, veh/h | 2011 | 3620 | 47 | 3456 | 1885 | 1610 | 0 | 3647 | 1598 | 1810 | 2704 | 824 |
| Grp Volume(v), veh/h | 482 | 188 | 198 | 300 | 173 | 62 | 0 | 844 | 293 | 157 | 575 | 559 |
| Grp Sat Flow(s),veh/h/ln | 1005 | 1791 | 1877 | 1728 | 1885 | 1610 | 0 | 1777 | 1598 | 1810 | 1791 | 1737 |
| Q Serve(g_s), s | 33.0 | 12.3 | 12.3 | 11.9 | 12.6 | 5.0 | 0.0 | 28.8 | 17.4 | 11.9 | 27.2 | 27.3 |
| Cycle Q Clear(g_c), s | 33.0 | 12.3 | 12.3 | 11.9 | 12.6 | 5.0 | 0.0 | 28.8 | 17.4 | 11.9 | 27.2 | 27.3 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 1.00 | 0.00 | | 1.00 | 1.00 | | 0.47 |
| Lane Grp Cap(c), veh/h | 507 | 452 | 473 | 370 | 202 | 173 | 0 | 1210 | 715 | 181 | 880 | 853 |
| V/C Ratio(X) | 0.95 | 0.42 | 0.42 | 0.81 | 0.86 | 0.36 | 0.00 | 0.70 | 0.41 | 0.87 | 0.65 | 0.66 |
| Avail Cap(c_a), veh/h | 516 | 459 | 481 | 392 | 214 | 183 | 0 | 1210 | 715 | 206 | 880 | 853 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.82 | 0.82 | 0.82 |
| Uniform Delay (d), s/veh | 51.5 | 43.7 | 43.7 | 61.1 | 61.4 | 58.0 | 0.0 | 39.9 | 26.1 | 59.8 | 17.1 | 17.1 |
| Incr Delay (d2), s/veh | 27.0 | 0.2 | 0.2 | 11.5 | 26.4 | 1.3 | 0.0 | 3.3 | 1.7 | 24.2 | 3.1 | 3.2 |
| 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 | 10.1 | 5.5 | 5.8 | 5.8 | 7.5 | 2.1 | 0.0 | 13.0 | 8.4 | 6.5 | 10.1 | 9.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 78.5 | 44.0 | 44.0 | 72.6 | 87.8 | 59.3 | 0.0 | 43.3 | 27.9 | 84.0 | 20.2 | 20.3 |
| LnGrp LOS | E | D | D | E | F | E | A | D | C | F | C | C |
| Approach Vol, veh/h | | 868 | | | 535 | | | 1137 | | | 1291 | |
| Approach Delay, s/veh | | 63.2 | | | 76.0 | | | 39.3 | | | 28.0 | |
| Approach LOS | | E | | | E | | | D | | | C | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 42.4 | 21.1 | 54.8 | | 22.1 | | 75.9 | | | | |
| Change Period (Y+Rc), s | | 7.1 | 7.1 | 7.1 | | 7.1 | | * 7.1 | | | | |
| Max Green Setting (Gmax), s | | 35.9 | 15.9 | 43.9 | | 15.9 | | * 68 | | | | |
| Max Q Clear Time (g_c+I1), s | | 35.0 | 13.9 | 30.8 | | 14.6 | | 29.3 | | | | |
| Green Ext Time (p_c), s | | 0.3 | 0.1 | 3.8 | | 0.3 | | 5.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 46.0 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 106: Grinstead Dr & Cherokee Pkwy




















HCM Signalized Intersection Capacity Analysis
 07/20/2022

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | NBL | NBR | NET | NER | SWL | SWT |
| Lane Configurations | |  |  | |  |  |
| Traffic Volume (vph) | 0 | 540 | 613 | 7 | 686 | 768 |
| Future Volume (vph) | 0 | 540 | 613 | 7 | 686 | 768 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 5.5 | | 5.5 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Fr _t | | 0.86 | 1.00 | | 1.00 | 1.00 |
| Fl _t Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1627 | 1878 | | 1787 | 1881 |
| Fl _t Permitted | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1627 | 1878 | | 1881 | 1881 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 0 | 545 | 619 | 7 | 693 | 776 |
| RTOR Reduction (vph) | 0 | 186 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 359 | 626 | 0 | 693 | 776 |
| Heavy Vehicles (%) | 0% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | | Perm | NA | | D,P+P | NA |
| Protected Phases | | | 2 | | 4 | Free |
| Permitted Phases | | 4 | | | 2 | |
| Actuated Green, G (s) | | 21.0 | 44.7 | | 65.7 | 76.7 |
| Effective Green, g (s) | | 21.0 | 44.7 | | 65.7 | 76.7 |
| Actuated g/C Ratio | | 0.27 | 0.58 | | 0.86 | 1.00 |
| Clearance Time (s) | | 5.5 | 5.5 | | 5.5 | |
| Vehicle Extension (s) | | 3.5 | 3.5 | | 3.5 | |
| Lane Grp Cap (vph) | | 445 | 1094 | | 1585 | 1881 |
| v/s Ratio Prot | | | c0.33 | | 0.12 | 0.41 |
| v/s Ratio Perm | | c0.22 | | | 0.25 | |
| v/c Ratio | | 0.81 | 0.57 | | 0.44 | 0.41 |
| Uniform Delay, d ₁ | | 26.0 | 10.0 | | 12.5 | 0.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d ₂ | | 10.6 | 2.2 | | 0.2 | 0.7 |
| Delay (s) | | 36.5 | 12.2 | | 12.7 | 0.7 |
| Level of Service | | D | B | | B | A |
| Approach Delay (s) | 36.5 | | 12.2 | | | 6.3 |
| Approach LOS | D | | B | | | A |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 14.0 | | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | | | 0.65 | | | |
| Actuated Cycle Length (s) | | | 76.7 | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 79.9% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 107: Payne St & Lexington Rd




















HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 197 | 478 | 2 | 78 | 297 | 4 | 3 | 162 | 103 | 15 | 162 | 137 |
| Future Volume (veh/h) | 197 | 478 | 2 | 78 | 297 | 4 | 3 | 162 | 103 | 15 | 162 | 137 |
| 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 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1870 |
| Adj Flow Rate, veh/h | 210 | 509 | 2 | 83 | 316 | 4 | 3 | 172 | 110 | 16 | 172 | 146 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Cap, veh/h | 669 | 1154 | 5 | 522 | 1151 | 15 | 50 | 252 | 159 | 59 | 218 | 176 |
| Arrive On Green | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1068 | 1876 | 7 | 903 | 1872 | 24 | 5 | 1087 | 686 | 39 | 941 | 761 |
| Grp Volume(v), veh/h | 210 | 0 | 511 | 83 | 0 | 320 | 285 | 0 | 0 | 334 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1068 | 0 | 1884 | 903 | 0 | 1896 | 1778 | 0 | 0 | 1741 | 0 | 0 |
| Q Serve(g_s), s | 8.5 | 0.0 | 10.8 | 4.0 | 0.0 | 5.9 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 14.4 | 0.0 | 10.8 | 14.8 | 0.0 | 5.9 | 11.0 | 0.0 | 0.0 | 13.5 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.01 | 0.01 | | 0.39 | 0.05 | | 0.44 |
| Lane Grp Cap(c), veh/h | 669 | 0 | 1158 | 522 | 0 | 1165 | 461 | 0 | 0 | 454 | 0 | 0 |
| V/C Ratio(X) | 0.31 | 0.00 | 0.44 | 0.16 | 0.00 | 0.27 | 0.62 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 669 | 0 | 1158 | 522 | 0 | 1165 | 781 | 0 | 0 | 762 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 10.0 | 0.0 | 7.6 | 11.5 | 0.0 | 6.7 | 26.4 | 0.0 | 0.0 | 27.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.2 | 0.0 | 1.2 | 0.7 | 0.0 | 0.6 | 1.4 | 0.0 | 0.0 | 2.3 | 0.0 | 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 | 2.0 | 0.0 | 4.0 | 0.8 | 0.0 | 2.2 | 4.6 | 0.0 | 0.0 | 5.7 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 11.3 | 0.0 | 8.9 | 12.2 | 0.0 | 7.3 | 27.7 | 0.0 | 0.0 | 29.7 | 0.0 | 0.0 |
| LnGrp LOS | B | A | A | B | A | A | C | A | A | C | A | A |
| Approach Vol, veh/h | | 721 | | | 403 | | | 285 | | | 334 | |
| Approach Delay, s/veh | | 9.6 | | | 8.3 | | | 27.7 | | | 29.7 | |
| Approach LOS | | A | | | A | | | C | | | C | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 51.7 | | 23.3 | | 51.7 | | 23.3 | | | | |
| Change Period (Y+Rc), s | | 5.6 | | * 5.9 | | 5.6 | | * 5.9 | | | | |
| Max Green Setting (Gmax), s | | 32.5 | | * 31 | | 32.5 | | * 31 | | | | |
| Max Q Clear Time (g_c+I1), s | | 16.4 | | 15.5 | | 16.8 | | 13.0 | | | | |
| Green Ext Time (p_c), s | | 3.9 | | 1.8 | | 2.1 | | 1.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 16.1 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 108: Alta Vista Rd & Lexington Rd






















HCM 6th Signalized Intersection Summary
 07/20/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | | |  | | |  |  |
| Traffic Volume (veh/h) | 5 | 699 | 127 | 66 | 638 | 1 | 71 | 7 | 55 | 4 | 12 | 3 |
| Future Volume (veh/h) | 5 | 699 | 127 | 66 | 638 | 1 | 71 | 7 | 55 | 4 | 12 | 3 |
| 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 | 1900 | 1885 | 1900 | 1856 | 1885 | 1900 | 1870 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adj Flow Rate, veh/h | 5 | 752 | 137 | 71 | 686 | 1 | 76 | 8 | 59 | 4 | 13 | 3 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 0 | 1 | 0 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 468 | 967 | 176 | 323 | 1173 | 2 | 224 | 34 | 97 | 115 | 210 | 41 |
| Arrive On Green | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 767 | 1552 | 283 | 620 | 1882 | 3 | 689 | 222 | 640 | 141 | 1385 | 269 |
| Grp Volume(v), veh/h | 5 | 0 | 889 | 71 | 0 | 687 | 143 | 0 | 0 | 20 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 767 | 0 | 1834 | 620 | 0 | 1885 | 1551 | 0 | 0 | 1795 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 16.4 | 4.4 | 0.0 | 10.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 10.2 | 0.0 | 16.4 | 20.7 | 0.0 | 10.0 | 3.9 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.15 | 1.00 | | 0.00 | 0.53 | | 0.41 | 0.20 | | 0.15 |
| Lane Grp Cap(c), veh/h | 468 | 0 | 1143 | 323 | 0 | 1175 | 355 | 0 | 0 | 366 | 0 | 0 |
| V/C Ratio(X) | 0.01 | 0.00 | 0.78 | 0.22 | 0.00 | 0.58 | 0.40 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 468 | 0 | 1143 | 323 | 0 | 1175 | 807 | 0 | 0 | 878 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 8.2 | 0.0 | 6.4 | 13.9 | 0.0 | 5.2 | 18.2 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 5.2 | 1.6 | 0.0 | 2.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 5.0 | 0.7 | 0.0 | 2.8 | 1.3 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 8.2 | 0.0 | 11.6 | 15.5 | 0.0 | 7.3 | 18.5 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 |
| LnGrp LOS | A | A | B | B | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 894 | | | 758 | | | 143 | | | 20 | |
| Approach Delay, s/veh | | 11.6 | | | 8.1 | | | 18.5 | | | 16.8 | |
| Approach LOS | | B | | | A | | | B | | | B | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 34.0 | | 12.2 | | 34.0 | | 12.2 | | | | |
| Change Period (Y+Rc), s | | * 5.2 | | * 5.2 | | * 5.2 | | * 5.2 | | | | |
| Max Green Setting (Gmax), s | | * 29 | | * 21 | | * 29 | | * 21 | | | | |
| Max Q Clear Time (g_c+I1), s | | 18.4 | | 5.9 | | 22.7 | | 2.4 | | | | |
| Green Ext Time (p_c), s | | 6.6 | | 0.4 | | 3.6 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 10.7 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 104: Etley Ave & Lexington Rd

HCM 6th Signalized Intersection Summary
 07/22/2022

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 77 | 604 | 136 | 11 | 346 | 23 | 101 | 69 | 120 | 191 | 96 | 41 |
| Future Volume (veh/h) | 77 | 604 | 136 | 11 | 346 | 23 | 101 | 69 | 120 | 191 | 96 | 41 |
| 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 | 1900 | 1885 | 1900 | 1900 | 1885 | 1885 | 1900 | 1900 | 1900 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 80 | 629 | 142 | 11 | 360 | 24 | 105 | 72 | 125 | 208 | 104 | 45 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 |
| Cap, veh/h | 472 | 1238 | 279 | 380 | 745 | 50 | 536 | 209 | 363 | 486 | 416 | 180 |
| Arrive On Green | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| Sat Flow, veh/h | 1015 | 2904 | 654 | 709 | 1748 | 117 | 1258 | 623 | 1082 | 1186 | 1238 | 536 |
| Grp Volume(v), veh/h | 80 | 388 | 383 | 11 | 0 | 384 | 105 | 0 | 197 | 208 | 0 | 149 |
| Grp Sat Flow(s), veh/h/ln | 1015 | 1791 | 1767 | 709 | 0 | 1864 | 1258 | 0 | 1705 | 1186 | 0 | 1774 |
| Q Serve(g_s), s | 2.3 | 6.0 | 6.0 | 0.4 | 0.0 | 5.6 | 2.5 | 0.0 | 3.3 | 6.0 | 0.0 | 2.3 |
| Cycle Q Clear(g_c), s | 8.0 | 6.0 | 6.0 | 6.5 | 0.0 | 5.6 | 4.8 | 0.0 | 3.3 | 9.3 | 0.0 | 2.3 |
| Prop In Lane | 1.00 | | 0.37 | 1.00 | | 0.06 | 1.00 | | 0.63 | 1.00 | | 0.30 |
| Lane Grp Cap(c), veh/h | 472 | 763 | 753 | 380 | 0 | 795 | 536 | 0 | 573 | 486 | 0 | 596 |
| V/C Ratio(X) | 0.17 | 0.51 | 0.51 | 0.03 | 0.00 | 0.48 | 0.20 | 0.00 | 0.34 | 0.43 | 0.00 | 0.25 |
| Avail Cap(c_a), veh/h | 1260 | 2154 | 2126 | 931 | 0 | 2242 | 962 | 0 | 1149 | 887 | 0 | 1196 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 10.7 | 7.9 | 8.0 | 10.3 | 0.0 | 7.8 | 10.9 | 0.0 | 9.4 | 12.9 | 0.0 | 9.1 |
| Incr Delay (d2), s/veh | 0.2 | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.2 | 0.0 | 0.4 | 0.6 | 0.0 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 1.7 | 1.7 | 0.1 | 0.0 | 1.6 | 0.6 | 0.0 | 1.0 | 1.3 | 0.0 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 10.9 | 8.5 | 8.5 | 10.3 | 0.0 | 8.3 | 11.0 | 0.0 | 9.8 | 13.5 | 0.0 | 9.3 |
| LnGrp LOS | B | A | A | B | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 851 | | | 395 | | | 302 | | | | 357 |
| Approach Delay, s/veh | | 8.7 | | | 8.4 | | | 10.2 | | | | 11.8 |
| Approach LOS | | A | | | A | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 20.6 | | 17.2 | | 20.6 | | 17.2 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 45.5 | | 25.5 | | 45.5 | | 25.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 10.0 | | 11.3 | | 8.5 | | 6.8 | | | | |
| Green Ext Time (p_c), s | | 6.2 | | 1.4 | | 2.7 | | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 9.4 | | | | | | | | |
| HCM 6th LOS | | | | A | | | | | | | | |

One Park North
 Lexington Road at Grinstead Drive
 Traffic Impact Study

2026 PM Peak Build
 105: Grinstead Dr & Etley Ave

HCM 6th TWSC
 07/20/2022

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | ↘ | ↗ | ↕ | ↕ |
| Traffic Vol, veh/h | 2 | 273 | 183 | 976 | 1178 | 37 |
| Future Vol, veh/h | 2 | 273 | 183 | 976 | 1178 | 37 |
| 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 | 0 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 99 | 99 | 99 | 99 | 99 | 99 |
| Heavy Vehicles, % | 0 | 0 | 0 | 1 | 1 | 0 |
| Mvmt Flow | 2 | 276 | 185 | 986 | 1190 | 37 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 2565 | 614 | 1227 | 0 | 0 |
| Stage 1 | 1209 | - | - | - | - |
| Stage 2 | 1356 | - | - | - | - |
| Critical Hdwy | 6.6 | 6.9 | 4.1 | - | - |
| Critical Hdwy Stg 1 | 5.8 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.3 | 2.2 | - | - |
| Pot Cap-1 Maneuver | 25 | 440 | 575 | - | - |
| Stage 1 | 249 | - | - | - | - |
| Stage 2 | 242 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 17 | 440 | 575 | - | - |
| Mov Cap-2 Maneuver | 17 | - | - | - | - |
| Stage 1 | 169 | - | - | - | - |
| Stage 2 | 242 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 27.5 | 2.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 575 | - | 17 | 440 | - | - |
| HCM Lane V/C Ratio | 0.321 | - | 0.119 | 0.627 | - | - |
| HCM Control Delay (s) | 14.2 | - | 243.5 | 25.9 | - | - |
| HCM Lane LOS | B | - | F | D | - | - |
| HCM 95th %tile Q(veh) | 1.4 | - | 0.3 | 4.2 | - | - |