

# Memorandum

Date: May 6, 2022  
To: City of Yorba Linda  
From: Preston Stinger, Fehr & Peers  
**Subject: Yorba Linda Temple – Traffic Commission Comment Addressal**

*UT21-2276*

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The purpose of this memorandum is to provide responses to comments from the City of Yorba Linda from the Traffic Commission (meeting held on April 28, 2002) regarding the Traffic Impact Analysis (TIA) that was prepared for the proposed Yorba Linda Temple located on Bastanchury Road west of Osmond Street in Yorba Linda, California. This memorandum will serve as an addendum to the April 2022 TIA report. The four comments addressed in this memorandum include:

1. Prepare ICE (Intersection Control Evaluation) Analysis for the intersection of Bastanchury Road and Osmond Street.
2. Update Synchro traffic analysis with the addition of a two-way left-turn lane (TWTL) replacing the striped left-turn lanes on Bastanchury Road at Osmond Street.
3. Perform trip generation analysis for the existing Newport Beach Temple.
4. Perform trip generation analysis for the existing Redlands Temple.
5. Update traffic analysis with the highest trip generation rate observed at Newport Beach Temple.

## ICE Analysis

ICE is a method developed by the Federal Highway Administration (FHWA) that "is a data-driven, performance-based framework to screen intersection alternatives and identify an optimal solution." Fehr & Peers utilized the CAP-X (Capacity Analysis for Planning Junctions) tool within ICE to analyze the intersection control for Bastanchury Road & Osmond Street. Using the traffic volume data collected for the TIA and the existing lane configurations at this intersection, the CAP-X analysis shows that the current intersection control of a side-street stop for Osmond Street and the driveway on the northside of Bastanchury Road is the optimal (lowest level of volume to capacity ratio) control for the intersection when evaluating the volume to capacity for vehicles. A



traffic signal control would be second best, followed by an all-way stop control. **Figure 1** shows the summary results for the CAP-X analysis.

| Type of Intersection     | Overall v/c Ratio | V/C Ranking | Pedestrian Accommodations | Bicycle Accommodations |
|--------------------------|-------------------|-------------|---------------------------|------------------------|
| Two-Way Stop Control E-W | 0.27              | 1           | Fair                      | Good                   |
| Traffic Signal           | 0.58              | 2           | Good                      | Excellent              |
| All-Way Stop Control     | 1.53              | 3           | Good                      | Excellent              |

**Figure 1: Bastanchury & Osmond CAP-X Analysis Results**

The TIA showed the results of the peak hour signal warrant analyses for each analyzed scenario, of which it showed that this intersection does not meet peak hour signal warrants. The ICE analysis and the peak hour signal warrant analyses show that a traffic signal at Bastanchury Road and Osmond Street would not be an ideal improvement at this time.

## TWLTL Analysis

Fehr & Peers updated the traffic analysis, using the Synchro software, for the Bastanchury Road and Osmond Street intersection to evaluate the change in vehicle delay and level of service (LOS) as a result of implementing a continuous TWLTL on Bastanchury Road instead of the current striped left-turn lane pockets. **Table 1** shows the results with no changes done to the current roadway configuration and **Table 2** shows the results with the change in striping to a TWLTL. It should be noted that in existing conditions, five vehicles were counted performing an eastbound left-turn (EBL) at this location in the AM peak hour, while zero vehicles were counted performing this movement in the PM peak hour. With the five EBL in the AM peak hour, the Synchro software did not show any reduction in delay with the TWLTL due to the limited availability of that lane with the EBL volumes present; however, in the PM peak hour there was a reduction in delay because there were no EBL vehicles present. For comparable comparison purposes, Fehr & Peers analyzed the AM peak hour with the assumption of zero EBL so that the reduction in delay as a result of the TWLTL was more apparent during the hour when there would be no EBL.

**Table 1. AM and PM Peak Hour Level of Service Summary – without TWLTL**

| Intersection |   |        | 2022 Background         | 2022 + Project           | 2024 Background         | 2024 + Project           | 2045 Background         | 2045 + Project           |
|--------------|---|--------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| ID           | Location                                      | Period | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS |
| 1            | Osmond Street / Bastanchury Road <sup>1</sup> | AM     | 40 / E                  | 40.4 / E                 | 42.3 / E                | 42.7 / E                 | 45.2 / E                | 45.6 / E                 |
|              |   | PM     | 28.4 / D                | 28.9 / D                 | 29.5 / D                | 29.9 / D                 | 42.7 / E                | 43.5 / E                 |



1. This represents the worst movement LOS and is only reported for unsignalized intersections using HCM 6 methodology.
2. Delay = average seconds of delay per vehicle.
3. LOS highlighted in **bold** indicate a deficient LOS.

**Table 2. AM and PM Peak Hour Level of Service Summary – with TWLTL**

| Intersection |   |        | 2022 Background         | 2022 + Project           | 2024 Background         | 2024 + Project           | 2045 Background         | 2045 + Project           |
|--------------|---|--------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| ID           | Location                                      | Period | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS | Delay <sup>2</sup> /LOS | Delay <sup>2</sup> / LOS |
| 1            | Osmond Street / Bastanchury Road <sup>1</sup> | AM     | 21.3 / C                | 21.5 / C                 | 21.8 / C                | 21.9 / C                 | 22.3 / C                | 22.3 / C                 |
|              |   | PM     | 19.1 / C                | 19.2 / C                 | 19.4 / C                | 19.6 / C                 | 23.6 / C                | 23.9 / C                 |

1. This represents the worst movement LOS and is only reported for unsignalized intersections using HCM 6 methodology.
2. Delay = average seconds of delay per vehicle.
3. LOS highlighted in **bold** indicate a deficient LOS.

Source: Fehr & Peers.

As shown in Table 1 and Table 2, with the change in striping to include a TWLTL (this change allows for two-stage left-turns to occur for the northbound to westbound left turning vehicles from Osmond Street), the delay is decreased enough to lower the LOS from E and D to C's across all scenarios. **Table 3** shows the percent change in delay with the TWLTL. This shows that on average, there is a 49% decrease in delay per vehicle in the AM peak hour and a 37% decrease in delay per vehicle in the PM peak hour for the northbound left-turn movement at the Bastanchury Road and Osmond Street intersection.

**Table 3. AM and PM Peak Hour Change in Delay with TWLTL**

| Intersection |   |        | 2022 Background   | 2022 + Project    | 2024 Background   | 2024 + Project    | 2045 Background   | 2045 + Project    |
|--------------|---|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| ID           | Location                                      | Period | % Change in Delay |
| 1            | Osmond Street / Bastanchury Road <sup>1</sup> | AM     | -47%              | -47%              | -48%              | -49%              | -51%              | -51%              |
|              |   | PM     | -33%              | -34%              | -34%              | -34%              | -45%              | -45%              |

1. Delay = average seconds of delay per vehicle.

Source: Fehr & Peers.



## Trip Generation Analysis for Peer Temples

### Newport Beach Temple

For the TIA, Fehr & Peers estimated the trip generation for the Yorba Linda California Temple using Friday and Saturday traffic counts completed at six other similar temples in 2017 and 2019:

- Bountiful, UT (2019)
- Draper, UT (2019)
- Oquirrh Mountain, UT (2019)
- Payson, UT (2017)
- Timpanogos, UT (2017)
- Gilbert, AZ (2017)

The traffic counts at each temple were grouped by hour of each day to determine the trip generation of each site, and then the trip generation of all temples were averaged to obtain an average trip generation for a temple. Traffic counts collected at the six sites for this analysis are included in **Appendix A**. The number of trips expected to be generated by a temple with these characteristics was based on the number of patron seats in the primary instruction rooms of each temple. The proposed Yorba Linda California Temple will have 80 patron seats and is expected to generate 64 trips in the weekday AM peak hour and 74 trips in the weekday PM peak hour based on the average trip rate from the six sites in Utah and Arizona.

The City of Yorba Linda asked why Fehr & Peers did not include the Newport Beach Temple as one of the sites to estimate the trip generation given the similar characteristics of both temples:

- Both temples have two instruction rooms with 40 patron seats each (a total of 80 patron seats)
- Both temples are in Orange County

Fehr & Peers stated that the data was collected prior to this study, and we have used it for several other studies over the past two to three years. However, to directly address these comments, Fehr & Peers has collected vehicle counts at the Newport Beach Temple.

### *Methodology*

A traffic data collection firm collected traffic counts for three days (72 hours) at the gate for the Newport Beach Temple. Traffic counts for the Newport Beach Temple are presented in **Appendix B**. **Figure 2** shows the location of the data collection equipment. The data collection period covered three days:

- Thursday April 21<sup>st</sup>, 2022



- Friday April 22<sup>nd</sup>, 2022
- Saturday April 23<sup>rd</sup>, 2022

Fehr & Peers processed the data, created a table for each hour of the day, and compared it to the trip generation estimated for the Yorba Linda Temple. The Thursday counts collected at the Newport Beach Temple are equal to or lower than the estimates originally prepared as part of the TIA.



**Figure 2: Newport Beach Temple Traffic Count Location**

#### *Analysis Results*

As part of the TIA, Fehr & Peers estimated the number of trips generated by the Yorba Linda Temple based on the average trip rate from the six previously mentioned temples. The data collected for the Newport Beach Temple included a weekday, a Friday, and a Saturday. In the TIA, Fehr & Peers compared the Friday counts of the six temples as a proxy for a midweek day (Tuesday to Thursday). **Table 3** shows the comparison of the Thursday and Friday traffic counts at the Newport Beach Temple to the weekday estimate used in the Yorba Linda Temple TIA. **Table 4** shows the comparison of the highest Saturday traffic count hour at Newport Beach Temple to the Saturday estimate provided in the Yorba Linda Temple TIA. As shown in these tables, the trip generation estimates provided in the TIA for each time period are higher than the observed traffic at a midweek day (Thursday) and Saturday at the Newport Beach Temple.

**Table 3. AM and PM Weekday Comparison.**

|           | Newport Beach Temple |        | Yorba Linda Temple |
|-----------|----------------------|--------|--------------------|
| Peak Hour | Thursday             | Friday | Weekday Estimate   |
| AM Period |                      |        |                    |



|                |    |    |  |    |
|----------------|----|----|--|----|
| 8:00AM-9:00AM  | 37 | 33 |  |    |
| 9:00AM-10:00AM | 38 | 63 |  | 64 |
| PM Period      |    |    |  |    |
| 4:00PM-5:00PM  | 71 | 84 |  |    |
| 5:00PM-6:00PM  | 40 | 71 |  | 74 |

**Table 4. Highest Saturday Hour Comparison.**

| Peak Hour    | Newport Beach Temple <sup>1</sup> | Yorba Linda Temple <sup>2</sup> |
|--------------|-----------------------------------|---------------------------------|
| Highest Hour | 75                                | 99                              |

Notes:

1. Recorded traffic volumes in April 2022.
2. Trip generation estimate included in the Yorba Linda Temple TIA.

### *Conclusion*

The comparison of data collected for a midweek day (Thursday) at Newport Beach Temple with the weekday trip generation estimate for the Yorba Linda Temple shows that the trip generation used for the TIA is higher than the recorded midweek day traffic data collected at the Newport Beach temple. Therefore, as stated in the TIA report, the trip generation for the Yorba Linda Temple is likely an overestimation of the number of vehicle trips that this temple will generate, providing a conservative foundation for analysis presented in that report.

### **Redlands Temple**

Coming soon....



## Traffic Analysis Update with Newport Beach Temple Trip Generation

As shown in the previous section, the Newport Beach Temple generates about 10 more vehicles in the PM peak hour on a Friday evening than was analyzed in the TIA. The following analysis was performed to document the traffic conditions for the higher PM peak hour trip generation at the study intersections.

The same methodology and assumptions from the TIA were used in this analysis. Please refer to the TIA for further details.

Traffic analysis was performed using 84 PM peak hour trips (compared to the 74 PM peak hour trips analyzed in the TIA). The AM peak hour trips were not updated, as the TIA already is using a more conservative trip generation estimate of 64 (compared to the 63 that was counted at the Newport Beach Temple). For the most conservative approach and to be consistent with the analysis in the TIA, the analysis shown below assumes the current lane configurations on Bastanchury Road (i.e. striping is not changed to a TWLTL). **Table 5** shows the LOS summary for "old trips" (74) compared to "new trips" (84). As shown, the LOS remains unchanged with the 10 additional trips with insignificant change in delay or volume to capacity ratios. The detailed LOS reports can be found in the Appendix F.

**Table 5: AM and PM Peak Hour Level of Service Summary**

| Intersection |   |              | 2022 Background | 2022 + Project | 2024 Background | 2024 + Project | 2045 Background | 2045 + Project |
|--------------|---|--------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| ID           | Location  | Period       | LOS             | LOS            | LOS             | LOS            | LOS             | LOS            |
| 1            | Valley View Avenue / Yorba Linda Boulevard <sup>2</sup> | PM-old trips | B               | B              | B               | B              | B               | B              |
|              |   | PM-new trips | B               | B              | B               | B              | B               | B              |
| 2            | Valley View Avenue / Imperial Highway <sup>2</sup>      | PM-old trips | B               | B              | B               | B              | C               | C              |
|              |   | PM-new trips | B               | B              | B               | B              | C               | C              |
| 3            | Imperial Highway / Bastanchury Road <sup>2</sup>        | PM-old trips | C               | C              | C               | C              | D               | D              |
|              |   | PM-new trips | C               | C              | C               | C              | D               | D              |
| 4            | Osmond Street / Bastanchury Road <sup>1</sup>           | PM-old trips | D               | D              | D               | D              | E               | E              |
|              |   | PM-new trips | D               | D              | D               | D              | E               | E              |



| Intersection |  |              | 2022 Background | 2022 + Project | 2024 Background | 2024 + Project | 2045 Background | 2045 + Project |
|--------------|--|--------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| ID           | Location   | Period       | LOS             | LOS            | LOS             | LOS            | LOS             | LOS            |
| 5            | Prospect Avenue / Bastanchury Road <sup>2</sup>        | PM-old trips | A               | A              | A               | A              | A               | A              |
|              |  | PM-new trips | A               | A              | A               | A              | A               | A              |
| 6            | Rose Drive / Bastanchury Road <sup>2</sup>             | PM-old trips | B               | B              | B               | B              | C               | C              |
|              |  | PM-new trips | B               | B              | B               | B              | C               | C              |
| 7            | Rose Drive / Yorba Linda Boulevard <sup>2</sup>        | PM-old trips | C               | C              | C               | C              | D               | D              |
|              |  | PM-new trips | C               | C              | C               | C              | D               | D              |
| 8            | Prospectus Avenue / Yorba Linda Boulevard <sup>2</sup> | PM-old trips | A               | A              | A               | A              | A               | A              |
|              |  | PM-new trips | A               | A              | A               | A              | A               | A              |
| 9            | Rose Drive / Imperial Highway                          | PM-old trips | D               | D              | D               | D              | E               | E              |
|              |  | PM-new trips | D               | D              | D               | D              | E               | E              |
| 101          | North Temple Access / Bastanchury Road <sup>1</sup>    | PM-old trips | -               | C              | -               | C              | -               | C              |
|              |  | PM-new trips | -               | C              | -               | C              | -               | C              |



# Appendix A: Six Temples Traffic Counts Summary

| Time Start |          | Time End |            | Draper |            | Payson |            | Gilbert |            | Timp  |            | Bountiful |            | Oquirrh |            | Average |            |
|------------|----------|----------|------------|--------|------------|--------|------------|---------|------------|-------|------------|-----------|------------|---------|------------|---------|------------|
|            |          | Trips    | Trips/Seat | Trips  | Trips/Seat | Trips  | Trips/Seat | Trips   | Trips/Seat | Trips | Trips/Seat | Trips     | Trips/Seat | Trips   | Trips/Seat | Trips   | Trips/Seat |
| Friday     | 7:00 AM  | 8:00 AM  |            |        |            |        |            |         |            |       |            |           |            |         |            |         |            |
|            | 8:00 AM  | 9:00 AM  | 91         | 0.46   | 164        | 0.61   | 143        | 0.53    | 200        | 0.56  | 89         | 0.25      | 114        | 0.57    | 134        | 0.49    |            |
|            | 9:00 AM  | 10:00 AM | 153        | 0.77   | 364        | 1.35   | 196        | 0.73    | 323        | 0.90  | 136        | 0.38      | 133        | 0.67    | 218        | 0.80    |            |
|            | 10:00 AM | 11:00 AM | 169        | 0.85   | 473        | 1.75   | 252        | 0.93    | 366        | 1.02  | 273        | 0.76      | 187        | 0.94    | 287        | 1.04    |            |
|            | 11:00 AM | 12:00 PM | 191        | 0.96   | 489        | 1.81   | 286        | 1.06    | 255        | 0.71  | 206        | 0.57      | 191        | 0.96    | 270        | 1.01    |            |
|            | 12:00 PM | 1:00 PM  | 131        | 0.66   | 430        | 1.59   | 154        | 0.57    | 268        | 0.74  | 256        | 0.71      | 246        | 1.23    | 248        | 0.92    |            |
|            | 1:00 PM  | 2:00 PM  | 100        | 0.50   | 428        | 1.59   | 177        | 0.66    | 227        | 0.63  | 200        | 0.56      | 154        | 0.77    | 214        | 0.78    |            |
|            | 2:00 PM  | 3:00 PM  | 111        | 0.56   | 440        | 1.63   | 137        | 0.51    | 193        | 0.54  | 213        | 0.59      | 158        | 0.79    | 209        | 0.77    |            |
|            | 3:00 PM  | 4:00 PM  | 167        | 0.84   | 249        | 0.92   | 240        | 0.89    | 250        | 0.69  | 292        | 0.81      | 162        | 0.81    | 227        | 0.83    |            |
|            | 4:00 PM  | 5:00 PM  | 183        | 0.92   | 260        | 0.96   | 236        | 0.87    | 276        | 0.77  | 297        | 0.83      | 239        | 1.20    | 249        | 0.92    |            |
| Saturday   | 5:00 PM  | 6:00 PM  | 169        | 0.85   | 334        | 1.24   | 187        | 0.69    | 276        | 0.77  | 317        | 0.88      | 227        | 1.14    | 252        | 0.93    |            |
|            | 6:00 PM  | 7:00 PM  | 154        | 0.77   | 375        | 1.39   | 138        | 0.51    | 269        | 0.75  | 224        | 0.62      | 182        | 0.91    | 224        | 0.82    |            |
|            | 7:00 PM  | 8:00 PM  | 110        | 0.55   | 210        | 0.78   | 131        | 0.49    | 198        | 0.55  | 289        | 0.80      | 151        | 0.76    | 182        | 0.65    |            |
|            | 7:00 AM  | 8:00 AM  |            |        |            |        |            |         |            |       |            |           |            |         |            |         |            |
|            | 8:00 AM  | 9:00 AM  | 144        | 0.72   | 360        | 1.33   | 171        | 0.63    | 252        | 0.70  | 111        | 0.31      | 152        | 0.76    | 198        | 0.74    |            |
|            | 9:00 AM  | 10:00 AM | 205        | 1.03   | 572        | 2.12   | 227        | 0.84    | 408        | 1.13  | 258        | 0.72      | 189        | 0.95    | 310        | 1.13    |            |
|            | 10:00 AM | 11:00 AM | 265        | 1.33   | 562        | 2.08   | 325        | 1.20    | 362        | 1.01  | 349        | 0.97      | 174        | 0.87    | 340        | 1.24    |            |
|            | 11:00 AM | 12:00 PM | 283        | 1.42   | 444        | 1.64   | 338        | 1.25    | 358        | 0.99  | 301        | 0.84      | 217        | 1.09    | 324        | 1.20    |            |
|            | 12:00 PM | 1:00 PM  | 280        | 1.40   | 362        | 1.34   | 207        | 0.77    | 374        | 1.04  | 390        | 1.08      | 264        | 1.32    | 313        | 1.16    |            |
|            | 1:00 PM  | 2:00 PM  | 195        | 0.98   | 312        | 1.16   | 216        | 0.80    | 321        | 0.89  | 304        | 0.84      | 202        | 1.01    | 258        | 0.95    |            |
|            | 2:00 PM  | 3:00 PM  | 170        | 0.85   | 186        | 0.69   | 170        | 0.63    | 313        | 0.87  | 301        | 0.84      | 208        | 1.04    | 225        | 0.82    |            |
|            | 3:00 PM  | 4:00 PM  | 257        | 1.29   | 128        | 0.47   | 282        | 1.04    | 457        | 1.27  | 353        | 0.98      | 205        | 1.03    | 280        | 1.01    |            |
|            | 4:00 PM  | 5:00 PM  | 158        | 0.79   | 131        | 0.49   | 287        | 1.06    | 310        | 0.86  | 271        | 0.75      | 278        | 1.39    | 239        | 0.89    |            |
|            | 5:00 PM  | 6:00 PM  | 182        | 0.91   | 186        | 0.69   | 169        | 0.63    | 330        | 0.92  | 334        | 0.93      | 259        | 1.30    | 243        | 0.89    |            |
|            | 6:00 PM  | 7:00 PM  | 135        | 0.68   | 146        | 0.54   | 191        | 0.71    | 233        | 0.65  | 217        | 0.60      | 141        | 0.71    | 177        | 0.65    |            |
|            | 7:00 PM  | 8:00 PM  | 99         | 0.50   | 98         | 0.36   | 131        | 0.49    | 171        | 0.48  | 207        | 0.58      | 134        | 0.67    | 140        | 0.51    |            |



# Appendix B: Newport Beach Temple Traffic Counts Appendix

**VOLUME**

2300 Bonita Canyon Dr Dwy Before Gate

Day: Thursday  
Date: 4/21/2022City: Newport Beach  
Project #: CA22\_010038\_002

| DAILY TOTALS |    |    |       | NB<br>0 | SB<br>0 | EB<br>379 | WB<br>375 |    |       |       |       | Total<br>754 |
|--------------|----|----|-------|---------|---------|-----------|-----------|----|-------|-------|-------|--------------|
| AM Period    | NB | SB | EB    | WB      | TOTAL   | PM Period | NB        | SB | EB    | WB    | TOTAL |              |
| 0:00         |    |    | 0     | 0       | 0       | 12:00     |           |    | 4     | 23    | 27    |              |
| 0:15         |    |    | 0     | 0       | 0       | 12:15     |           |    | 3     | 6     | 9     |              |
| 0:30         |    |    | 0     | 0       | 0       | 12:30     |           |    | 4     | 5     | 9     |              |
| 0:45         |    |    | 0     | 0       | 0       | 12:45     |           |    | 6     | 17    | 40    |              |
| 1:00         |    |    | 0     | 0       | 0       | 13:00     |           |    | 10    | 8     | 18    |              |
| 1:15         |    |    | 0     | 0       | 0       | 13:15     |           |    | 2     | 2     | 4     |              |
| 1:30         |    |    | 0     | 0       | 0       | 13:30     |           |    | 3     | 8     | 11    |              |
| 1:45         |    |    | 0     | 0       | 0       | 13:45     |           |    | 5     | 20    | 26    |              |
| 2:00         |    |    | 0     | 0       | 0       | 14:00     |           |    | 2     | 10    | 12    |              |
| 2:15         |    |    | 0     | 0       | 0       | 14:15     |           |    | 4     | 6     | 10    |              |
| 2:30         |    |    | 0     | 0       | 0       | 14:30     |           |    | 4     | 3     | 7     |              |
| 2:45         |    |    | 0     | 0       | 0       | 14:45     |           |    | 3     | 13    | 22    |              |
| 3:00         |    |    | 0     | 0       | 0       | 15:00     |           |    | 3     | 11    | 14    |              |
| 3:15         |    |    | 0     | 0       | 0       | 15:15     |           |    | 6     | 6     | 12    |              |
| 3:30         |    |    | 0     | 0       | 0       | 15:30     |           |    | 5     | 0     | 5     |              |
| 3:45         |    |    | 0     | 0       | 0       | 15:45     |           |    | 12    | 26    | 35    |              |
| 4:00         |    |    | 0     | 0       | 0       | 16:00     |           |    | 9     | 3     | 12    |              |
| 4:15         |    |    | 0     | 0       | 0       | 16:15     |           |    | 9     | 7     | 16    |              |
| 4:30         |    |    | 0     | 0       | 0       | 16:30     |           |    | 13    | 9     | 22    |              |
| 4:45         |    |    | 0     | 0       | 0       | 16:45     |           |    | 9     | 40    | 71    |              |
| 5:00         |    |    | 0     | 0       | 0       | 17:00     |           |    | 4     | 10    | 14    |              |
| 5:15         |    |    | 5     | 0       | 5       | 17:15     |           |    | 2     | 10    | 12    |              |
| 5:30         |    |    | 8     | 0       | 8       | 17:30     |           |    | 4     | 2     | 6     |              |
| 5:45         |    |    | 17    | 30      | 30      | 17:45     |           |    | 5     | 15    | 30    |              |
| 6:00         |    |    | 10    | 0       | 10      | 18:00     |           |    | 9     | 2     | 11    |              |
| 6:15         |    |    | 5     | 0       | 5       | 18:15     |           |    | 6     | 1     | 7     |              |
| 6:30         |    |    | 10    | 1       | 11      | 18:30     |           |    | 8     | 6     | 14    |              |
| 6:45         |    |    | 8     | 33      | 0       | 18:45     |           |    | 4     | 27    | 34    |              |
| 7:00         |    |    | 3     | 0       | 3       | 19:00     |           |    | 8     | 7     | 15    |              |
| 7:15         |    |    | 3     | 2       | 5       | 19:15     |           |    | 6     | 4     | 10    |              |
| 7:30         |    |    | 4     | 0       | 4       | 19:30     |           |    | 8     | 3     | 11    |              |
| 7:45         |    |    | 1     | 11      | 2       | 19:45     |           |    | 4     | 26    | 41    |              |
| 8:00         |    |    | 8     | 1       | 9       | 20:00     |           |    | 0     | 4     | 4     |              |
| 8:15         |    |    | 7     | 1       | 8       | 20:15     |           |    | 0     | 19    | 19    |              |
| 8:30         |    |    | 4     | 4       | 8       | 20:30     |           |    | 2     | 10    | 12    |              |
| 8:45         |    |    | 5     | 24      | 7       | 20:45     |           |    | 0     | 2     | 46    |              |
| 9:00         |    |    | 1     | 3       | 4       | 21:00     |           |    | 0     | 2     | 2     |              |
| 9:15         |    |    | 12    | 2       | 14      | 21:15     |           |    | 0     | 5     | 5     |              |
| 9:30         |    |    | 5     | 0       | 5       | 21:30     |           |    | 0     | 8     | 8     |              |
| 9:45         |    |    | 8     | 26      | 7       | 21:45     |           |    | 0     | 19    | 34    |              |
| 10:00        |    |    | 3     | 6       | 9       | 22:00     |           |    | 1     | 9     | 10    |              |
| 10:15        |    |    | 5     | 7       | 12      | 22:15     |           |    | 0     | 1     | 1     |              |
| 10:30        |    |    | 9     | 8       | 17      | 22:30     |           |    | 0     | 0     | 0     |              |
| 10:45        |    |    | 16    | 33      | 3       | 22:45     |           |    | 0     | 1     | 11    |              |
| 11:00        |    |    | 6     | 4       | 10      | 23:00     |           |    | 0     | 0     | 0     |              |
| 11:15        |    |    | 14    | 7       | 21      | 23:15     |           |    | 0     | 0     | 0     |              |
| 11:30        |    |    | 13    | 5       | 18      | 23:30     |           |    | 0     | 0     | 0     |              |
| 11:45        |    |    | 2     | 35      | 17      | 23:45     |           |    | 0     | 0     | 0     |              |
| TOTALS       |    |    | 192   | 87      | 279     | TOTALS    |           |    | 187   | 288   | 475   |              |
| SPLIT %      |    |    | 68.8% | 31.2%   | 37.0%   | SPLIT %   |           |    | 39.4% | 60.6% | 63.0% |              |

| DAILY TOTALS    |       |       |  | NB<br>0 | SB<br>0 | EB<br>379 | WB<br>375 |                 |       |       |  | Total<br>754 |
|-----------------|-------|-------|--|---------|---------|-----------|-----------|-----------------|-------|-------|--|--------------|
| AM Peak Hour    |       |       |  | 10:45   | 11:15   | 11:15     |           | PM Peak Hour    |       |       |  | 16:15        |
| AM Pk Volume    |       |       |  | 49      | 52      | 85        |           | PM Pk Volume    |       |       |  | 73           |
| Pk Hr Factor    |       |       |  | 0.766   | 0.565   | 0.787     |           | Pk Hr Factor    |       |       |  | 0.830        |
| 7 - 9 Volume    | 0     | 0     |  | 35      | 17      | 52        |           | 4 - 6 Volume    | 0     | 0     |  | 111          |
| 7 - 9 Peak Hour |       |       |  | 8:00    | 8:00    | 8:00      |           | 4 - 6 Peak Hour |       |       |  | 16:15        |
| 7 - 9 Pk Volume | 0     | 0     |  | 24      | 13      | 37        |           | 4 - 6 Pk Volume | 0     | 0     |  | 73           |
| Pk Hr Factor    | 0.000 | 0.000 |  | 0.750   | 0.464   | 0.771     |           | Pk Hr Factor    | 0.000 | 0.000 |  | 0.830        |

**VOLUME**

2300 Bonita Canyon Dr Dwy Before Gate

Day: Friday  
Date: 4/22/2022City: Newport Beach  
Project #: CA22\_010038\_002

| DAILY TOTALS   |    |    |       | NB<br>0 | SB<br>0 | EB<br>432      | WB<br>424 |    |       |       |              | Total<br>856 |
|----------------|----|----|-------|---------|---------|----------------|-----------|----|-------|-------|--------------|--------------|
| AM Period      | NB | SB | EB    | WB      | TOTAL   | PM Period      | NB        | SB | EB    | WB    | TOTAL        |              |
| 0:00           |    |    | 0     | 0       | 0       | 12:00          |           |    | 1     | 29    | 30           |              |
| 0:15           |    |    | 0     | 0       | 0       | 12:15          |           |    | 2     | 7     | 9            |              |
| 0:30           |    |    | 0     | 0       | 0       | 12:30          |           |    | 5     | 7     | 12           |              |
| 0:45           |    |    | 0     | 0       | 0       | 12:45          |           |    | 2     | 10    | 45           |              |
| 1:00           |    |    | 0     | 0       | 0       | 13:00          |           |    | 1     | 4     | 5            |              |
| 1:15           |    |    | 0     | 0       | 0       | 13:15          |           |    | 12    | 3     | 15           |              |
| 1:30           |    |    | 0     | 0       | 0       | 13:30          |           |    | 2     | 3     | 5            |              |
| 1:45           |    |    | 0     | 0       | 0       | 13:45          |           |    | 5     | 20    | 18           |              |
| 2:00           |    |    | 0     | 0       | 0       | 14:00          |           |    | 2     | 10    | 12           |              |
| 2:15           |    |    | 0     | 0       | 0       | 14:15          |           |    | 6     | 4     | 10           |              |
| 2:30           |    |    | 0     | 0       | 0       | 14:30          |           |    | 7     | 5     | 12           |              |
| 2:45           |    |    | 0     | 0       | 0       | 14:45          |           |    | 7     | 22    | 19           |              |
| 3:00           |    |    | 0     | 0       | 0       | 15:00          |           |    | 1     | 6     | 7            |              |
| 3:15           |    |    | 0     | 0       | 0       | 15:15          |           |    | 5     | 6     | 11           |              |
| 3:30           |    |    | 0     | 0       | 0       | 15:30          |           |    | 7     | 0     | 7            |              |
| 3:45           |    |    | 0     | 0       | 0       | 15:45          |           |    | 20    | 33    | 18           |              |
| 4:00           |    |    | 0     | 0       | 0       | 16:00          |           |    | 14    | 11    | 25           |              |
| 4:15           |    |    | 0     | 0       | 0       | 16:15          |           |    | 11    | 3     | 14           |              |
| 4:30           |    |    | 0     | 0       | 0       | 16:30          |           |    | 15    | 5     | 20           |              |
| 4:45           |    |    | 0     | 0       | 0       | 16:45          |           |    | 13    | 53    | 31           |              |
| 5:00           |    |    | 0     | 0       | 0       | 17:00          |           |    | 4     | 24    | 28           |              |
| 5:15           |    |    | 2     | 0       | 2       | 17:15          |           |    | 5     | 8     | 13           |              |
| 5:30           |    |    | 7     | 0       | 7       | 17:30          |           |    | 8     | 11    | 19           |              |
| 5:45           |    | 21 | 30    | 0       | 21      | 17:45          |           |    | 8     | 25    | 346          |              |
| 6:00           |    |    | 5     | 0       | 5       | 18:00          |           |    | 8     | 3     | 11           |              |
| 6:15           |    |    | 3     | 0       | 3       | 18:15          |           |    | 13    | 4     | 17           |              |
| 6:30           |    |    | 5     | 0       | 5       | 18:30          |           |    | 4     | 4     | 8            |              |
| 6:45           |    | 5  | 18    | 0       | 5       | 18:45          |           |    | 6     | 31    | 23           |              |
| 7:00           |    |    | 1     | 0       | 1       | 19:00          |           |    | 3     | 7     | 10           |              |
| 7:15           |    |    | 1     | 0       | 1       | 19:15          |           |    | 5     | 5     | 10           |              |
| 7:30           |    |    | 3     | 2       | 5       | 19:30          |           |    | 6     | 5     | 11           |              |
| 7:45           |    | 5  | 10    | 0       | 5       | 19:45          |           |    | 8     | 22    | 18           |              |
| 8:00           |    |    | 10    | 1       | 11      | 20:00          |           |    | 1     | 8     | 9            |              |
| 8:15           |    |    | 6     | 0       | 6       | 20:15          |           |    | 4     | 4     | 8            |              |
| 8:30           |    |    | 5     | 2       | 7       | 20:30          |           |    | 0     | 21    | 21           |              |
| 8:45           |    | 4  | 25    | 5       | 9       | 20:45          |           |    | 0     | 5     | 43           |              |
| 9:00           |    |    | 7     | 2       | 9       | 21:00          |           |    | 0     | 8     | 8            |              |
| 9:15           |    |    | 7     | 1       | 8       | 21:15          |           |    | 1     | 7     | 8            |              |
| 9:30           |    |    | 24    | 4       | 28      | 21:30          |           |    | 2     | 6     | 8            |              |
| 9:45           |    | 14 | 52    | 4       | 11      | 21:45          |           |    | 0     | 3     | 39           |              |
| 10:00          |    |    | 12    | 6       | 18      | 22:00          |           |    | 0     | 16    | 16           |              |
| 10:15          |    |    | 10    | 8       | 18      | 22:15          |           |    | 0     | 3     | 3            |              |
| 10:30          |    |    | 7     | 11      | 18      | 22:30          |           |    | 0     | 4     | 4            |              |
| 10:45          |    | 17 | 46    | 5       | 30      | 22:45          |           |    | 0     | 0     | 23           |              |
| 11:00          |    |    | 5     | 5       | 10      | 23:00          |           |    | 0     | 0     | 0            |              |
| 11:15          |    |    | 7     | 4       | 11      | 23:15          |           |    | 0     | 0     | 0            |              |
| 11:30          |    |    | 9     | 15      | 24      | 23:30          |           |    | 0     | 0     | 0            |              |
| 11:45          |    | 6  | 27    | 26      | 50      | 23:45          |           |    | 0     | 0     | 0            |              |
| <b>TOTALS</b>  |    |    | 208   | 101     | 309     | <b>TOTALS</b>  |           |    | 224   | 323   | <b>547</b>   |              |
| <b>SPLIT %</b> |    |    | 67.3% | 32.7%   | 36.1%   | <b>SPLIT %</b> |           |    | 41.0% | 59.0% | <b>63.9%</b> |              |

| DAILY TOTALS    |       |       |       | NB<br>0 | SB<br>0 | EB<br>432       | WB<br>424 |       |       |       | Total<br>856 |
|-----------------|-------|-------|-------|---------|---------|-----------------|-----------|-------|-------|-------|--------------|
| AM Peak Hour    |       |       | 9:30  | 11:30   | 11:15   | PM Peak Hour    |           |       | 15:45 | 16:45 | 16:15        |
| AM Pk Volume    |       |       | 60    | 77      | 97      | PM Pk Volume    |           |       | 60    | 55    | 87           |
| Pk Hr Factor    |       |       | 0.625 | 0.664   | 0.758   | Pk Hr Factor    |           |       | 0.750 | 0.573 | 0.777        |
| 7 - 9 Volume    | 0     | 0     | 35    | 10      | 45      | 4 - 6 Volume    | 0         | 0     | 78    | 77    | 155          |
| 7 - 9 Peak Hour |       |       | 7:45  | 8:00    | 8:00    | 4 - 6 Peak Hour |           |       | 16:00 | 16:45 | 16:15        |
| 7 - 9 Pk Volume | 0     | 0     | 26    | 8       | 33      | 4 - 6 Pk Volume | 0         | 0     | 53    | 55    | 87           |
| Pk Hr Factor    | 0.000 | 0.000 | 0.650 | 0.400   | 0.750   | Pk Hr Factor    | 0.000     | 0.000 | 0.883 | 0.573 | 0.777        |

**VOLUME**

2300 Bonita Canyon Dr Dwy Before Gate

Day: Saturday  
Date: 4/23/2022City: Newport Beach  
Project #: CA22\_010038\_002

| DAILY TOTALS   |    |    |       | NB<br>0 | SB<br>0 | EB<br>385      | WB<br>383 |    |       |       |              | Total<br>768 |
|----------------|----|----|-------|---------|---------|----------------|-----------|----|-------|-------|--------------|--------------|
| AM Period      | NB | SB | EB    | WB      | TOTAL   | PM Period      | NB        | SB | EB    | WB    | TOTAL        |              |
| 0:00           |    |    | 0     | 0       | 0       | 12:00          |           |    | 4     | 23    | 27           |              |
| 0:15           |    |    | 0     | 0       | 0       | 12:15          |           |    | 0     | 12    | 12           |              |
| 0:30           |    |    | 0     | 0       | 0       | 12:30          |           |    | 4     | 1     | 5            |              |
| 0:45           |    |    | 0     | 0       | 0       | 12:45          |           |    | 5     | 37    | 6 50         |              |
| 1:00           |    |    | 0     | 0       | 0       | 13:00          |           |    | 8     | 1     | 9            |              |
| 1:15           |    |    | 0     | 0       | 0       | 13:15          |           |    | 6     | 4     | 10           |              |
| 1:30           |    |    | 0     | 0       | 0       | 13:30          |           |    | 2     | 3     | 5            |              |
| 1:45           |    |    | 0     | 0       | 0       | 13:45          |           |    | 5     | 13    | 10 34        |              |
| 2:00           |    |    | 0     | 0       | 0       | 14:00          |           |    | 2     | 4     | 6            |              |
| 2:15           |    |    | 0     | 0       | 0       | 14:15          |           |    | 9     | 2     | 11           |              |
| 2:30           |    |    | 0     | 0       | 0       | 14:30          |           |    | 16    | 3     | 19           |              |
| 2:45           |    |    | 0     | 0       | 0       | 14:45          |           |    | 6     | 33    | 2 11 8 44    |              |
| 3:00           |    |    | 0     | 0       | 0       | 15:00          |           |    | 10    | 6     | 16           |              |
| 3:15           |    |    | 0     | 0       | 0       | 15:15          |           |    | 4     | 5     | 9            |              |
| 3:30           |    |    | 0     | 0       | 0       | 15:30          |           |    | 9     | 8     | 17           |              |
| 3:45           |    |    | 0     | 0       | 0       | 15:45          |           |    | 23    | 46    | 30 72        |              |
| 4:00           |    |    | 0     | 0       | 0       | 16:00          |           |    | 9     | 4     | 13           |              |
| 4:15           |    |    | 0     | 0       | 0       | 16:15          |           |    | 5     | 2     | 7            |              |
| 4:30           |    |    | 0     | 0       | 0       | 16:30          |           |    | 12    | 9     | 21           |              |
| 4:45           |    |    | 0     | 0       | 0       | 16:45          |           |    | 13    | 39    | 19 60        |              |
| 5:00           |    |    | 0     | 0       | 0       | 17:00          |           |    | 5     | 10    | 15           |              |
| 5:15           |    |    | 1     | 0       | 1       | 17:15          |           |    | 2     | 25    | 27           |              |
| 5:30           |    |    | 5     | 0       | 5       | 17:30          |           |    | 8     | 10    | 18           |              |
| 5:45           |    |    | 17    | 23      | 0       | 17:45          |           |    | 11    | 26    | 4 49 15 75   |              |
| 6:00           |    |    | 8     | 0       | 8       | 18:00          |           |    | 3     | 5     | 8            |              |
| 6:15           |    |    | 3     | 0       | 3       | 18:15          |           |    | 6     | 2     | 8            |              |
| 6:30           |    |    | 8     | 0       | 8       | 18:30          |           |    | 5     | 3     | 8            |              |
| 6:45           |    |    | 7     | 26      | 0       | 18:45          |           |    | 1     | 15    | 11 21 12 36  |              |
| 7:00           |    |    | 6     | 0       | 6       | 19:00          |           |    | 3     | 16    | 19           |              |
| 7:15           |    |    | 4     | 0       | 4       | 19:15          |           |    | 9     | 5     | 14           |              |
| 7:30           |    |    | 2     | 1       | 3       | 19:30          |           |    | 11    | 7     | 18           |              |
| 7:45           |    |    | 7     | 19      | 0 1     | 19:45          |           |    | 3     | 26    | 5 33 8 59    |              |
| 8:00           |    |    | 3     | 1       | 4       | 20:00          |           |    | 0     | 5     | 5            |              |
| 8:15           |    |    | 4     | 4       | 8       | 20:15          |           |    | 2     | 4     | 6            |              |
| 8:30           |    |    | 5     | 5       | 10      | 20:30          |           |    | 1     | 11    | 12           |              |
| 8:45           |    |    | 11    | 23      | 10 20   | 20:45          |           |    | 0     | 3     | 8 28 8 31    |              |
| 9:00           |    |    | 3     | 4       | 7       | 21:00          |           |    | 1     | 13    | 14           |              |
| 9:15           |    |    | 5     | 2       | 7       | 21:15          |           |    | 0     | 2     | 2            |              |
| 9:30           |    |    | 7     | 1       | 8       | 21:30          |           |    | 1     | 4     | 5            |              |
| 9:45           |    |    | 9     | 24      | 2 9     | 21:45          |           |    | 0     | 2     | 16 35 16 37  |              |
| 10:00          |    |    | 0     | 4       | 4       | 22:00          |           |    | 1     | 15    | 16           |              |
| 10:15          |    |    | 7     | 4       | 11      | 22:15          |           |    | 0     | 4     | 4            |              |
| 10:30          |    |    | 7     | 9       | 16      | 22:30          |           |    | 0     | 5     | 5            |              |
| 10:45          |    |    | 8     | 22      | 5 22    | 22:45          |           |    | 0     | 1     | 0 24 0 25    |              |
| 11:00          |    |    | 5     | 8       | 13      | 23:00          |           |    | 0     | 0     | 0            |              |
| 11:15          |    |    | 4     | 3       | 7       | 23:15          |           |    | 0     | 0     | 0            |              |
| 11:30          |    |    | 7     | 6       | 13      | 23:30          |           |    | 0     | 0     | 0            |              |
| 11:45          |    |    | 7     | 23      | 16 33   | 23:45          |           |    | 0     | 0     | 0            |              |
| <b>TOTALS</b>  |    |    | 160   | 85      | 245     | <b>TOTALS</b>  |           |    | 225   | 298   | <b>523</b>   |              |
| <b>SPLIT %</b> |    |    | 65.3% | 34.7%   | 31.9%   | <b>SPLIT %</b> |           |    | 43.0% | 57.0% | <b>68.1%</b> |              |

| DAILY TOTALS    |       |       |       | NB<br>0 | SB<br>0 | EB<br>385       | WB<br>383 |       |       |       |       | Total<br>768 |
|-----------------|-------|-------|-------|---------|---------|-----------------|-----------|-------|-------|-------|-------|--------------|
| AM Peak Hour    |       |       | 5:45  | 11:30   | 11:30   | PM Peak Hour    |           |       | 15:45 | 16:45 | 16:30 |              |
| AM Pk Volume    |       |       | 36    | 57      | 75      | PM Pk Volume    |           |       | 49    | 51    | 82    |              |
| Pk Hr Factor    |       |       | 0.529 | 0.620   | 0.694   | Pk Hr Factor    |           |       | 0.533 | 0.510 | 0.759 |              |
| 7 - 9 Volume    | 0     | 0     | 42    | 21      | 63      | 4 - 6 Volume    | 0         | 0     | 65    | 70    | 135   |              |
| 7 - 9 Peak Hour |       |       | 8:00  | 8:00    | 8:00    | 4 - 6 Peak Hour |           |       | 16:00 | 16:45 | 16:30 |              |
| 7 - 9 Pk Volume | 0     | 0     | 23    | 20      | 43      | 4 - 6 Pk Volume | 0         | 0     | 39    | 51    | 82    |              |
| Pk Hr Factor    | 0.000 | 0.000 | 0.523 | 0.500   | 0.512   | Pk Hr Factor    | 0.000     | 0.000 | 0.750 | 0.510 | 0.759 |              |



# C: Redlands Temple Traffic Counts



# Appendix D: CAP-X Analysis Sheets

# Capacity Analysis for Planning of Junctions

## Summary Report

|                              |                      |
|------------------------------|----------------------|
| Project Name:                | LDS Yorba Linda      |
| Project Number:              | UT21-2276            |
| Location:                    | Yorba Linda, CA      |
| Date:                        | 2045 Plus Project AM |
| Number of Intersection Legs: | 4                    |
| Major Street Direction       | East-West            |

| Traffic Volume Demand          |   |   |   |  |                |               |
|--------------------------------|---|---|---|--|----------------|---------------|
|                                | Volume (Veh/hr)   |   |   |  | Percent (%)    |               |
|                                | U-Turn<br> | Left<br> | Thru<br> | Right<br> | Heavy Vehicles | Volume Growth |
| Eastbound                      | 0   | 1   | 822   | 1  | 2.00%          | 0.00%         |
| Westbound                      | 0   | 1   | 954   | 1  | 2.00%          | 0.00%         |
| Southbound                     | 0   | 1   | 1   | 5  | 2.00%          | 0.00%         |
| Northbound                     | 0   | 5   | 1   | 5  | 2.00%          | 0.00%         |
| Adjustment Factor              | 0.80  | 0.95  |   | 0.85   |                |               |
| Suggested                      | <b>0.80</b>   | <b>0.95</b>   |   | <b>0.85</b>  |                |               |
| Truck to PCE Factor            |   |   |   | <b>Suggested = 2.00</b>  | 2.00           |               |
| Multimodal Activity Level      |   | Low   |   |  |                |               |
| Critical Lane Volume Threshold | 2-phase signal  | <b>Suggested = 1800 (Urban), 1650 (Rural)</b>   |   |  | 1800           |               |
|                                | 3-phase signal  | <b>Suggested = 1750 (Urban), 1600 (Rural)</b>   |   |  | 1750           |               |
|                                | 4-phase signal  | <b>Suggested = 1700 (Urban), 1550 (Rural)</b>   |   |  | 1700           |               |

# Capacity Analysis for Planning of Junctions

## **Summary Report**

# Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

|                              |                      |  |
|------------------------------|----------------------|--|
| Project Name:                | LDS Yorba Linda      |  |
| Project Number:              | UT21-2276            |  |
| Location:                    | Yorba Linda, CA      |  |
| Date:                        | 2045 Plus Project AM |  |
| Number of Intersection Legs: | 4                    |  |
| Major Street Direction:      | East-West            |  |

| Traffic Volume Demand          |   |   |   |  |                |               |
|--------------------------------|---|---|---|--|----------------|---------------|
|                                | Volume (Veh/hr)   |   |   |  | Percent (%)    |               |
|                                | U-Turn<br> | Left<br> | Thru<br> | Right<br> | Heavy Vehicles | Volume Growth |
| Eastbound                      | 0   | 1   | 822   | 1  | 2.00%          | 0.00%         |
| Westbound                      | 0   | 1   | 954   | 1  | 2.00%          | 0.00%         |
| Southbound                     | 0   | 1   | 1   | 5  | 2.00%          | 0.00%         |
| Northbound                     | 0   | 5   | 1   | 5  | 2.00%          | 0.00%         |
| Adjustment Factor              | 0.80  | 0.95  |   | 0.85   |                |               |
| Suggested                      | <b>0.80</b>   | <b>0.95</b>   |   | <b>0.85</b>  |                |               |
| Truck to PCE Factor            |   |   |   | <b>Suggested = 2.00</b>  | 2.00           |               |
| Multimodal Activity Level      |   | Low   |   |  |                |               |
| Critical Lane Volume Threshold | 2-phase signal  | <b>Suggested = 1800 (Urban), 1650 (Rural)</b>   |   |  | 1800           |               |
|                                | 3-phase signal  | <b>Suggested = 1750 (Urban), 1600 (Rural)</b>   |   |  | 1750           |               |
|                                | 4-phase signal  | <b>Suggested = 1700 (Urban), 1550 (Rural)</b>   |   |  | 1700           |               |

## Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

| Number of Lanes for Non-roundabout Intersections |       |            |   |   |            |   |   |           |   |   |           |   |   |
|--|-------|------------|---|---|------------|---|---|-----------|---|---|-----------|---|---|
| Type of Intersection                             | Sheet | Northbound |   |   | Southbound |   |   | Eastbound |   |   | Westbound |   |   |
|  |       | U          | L | T | R          | U | L | T         | R | U | L         | T | R |
| Traffic Signal                                   | FULL  | /          | 1 | 1 | 1          | / | 1 | 1         | 1 | / | 1         | 1 | 1 |
| Two-Way Stop Control                             | E-W   | /          | 0 | 1 | 1          | / | 0 | 1         | 0 | / | 1         | 2 | 1 |
| All-Way Stop Control                             | FULL  | /          | 0 | 1 | 0          | / | 0 | 1         | 0 | / | 0         | 1 | 0 |

| Number of Lanes for Grade Separated Intersections |       |            |   |   |   |            |   |   |   |           |   |   |   |           |   |   |   |
|---|-------|------------|---|---|---|------------|---|---|---|-----------|---|---|---|-----------|---|---|---|
| TYPE OF INTERCHANGE                               | Sheet | Northbound |   |   |   | Southbound |   |   |   | Eastbound |   |   |   | Westbound |   |   |   |
|   |       | U          | L | T | R | U          | L | T | R | U         | L | T | R | U         | L | T | R |

| Number of Lanes for Interchanges |       |            |   |            |   |           |   |           |   |
|----------------------------------|-------|------------|---|------------|---|-----------|---|-----------|---|
| TYPE OF INTERCHANGE              | Sheet | Northbound |   | Southbound |   | Eastbound |   | Westbound |   |
|                                  |       | U          | L | T          | R | U         | L | T         | R |

## Capacity Analysis for Planning of Junctions

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## Results for Non-roundabout Intersections

| TYPE OF INTERSECTION | Sheet | Zone 1<br>(North) |     | Zone 2<br>(South) |     | Zone 3 (East) |     | Zone 4<br>(West) |     | Zone 5<br>(Center) |      | Overall v/c<br>Ratio | Pedestrian<br>Accommodations | Bicycle<br>Accommodations |
|----------------------|-------|-------------------|-----|-------------------|-----|---------------|-----|------------------|-----|--------------------|------|----------------------|------------------------------|---------------------------|
|                      |       | CLV               | V/C | CLV               | V/C | CLV           | V/C | CLV              | V/C | CLV                | V/C  |                      |                              |                           |
| Traffic Signal       | FULL  |                   |     |                   |     |               |     |                  |     | 985                | 0.58 | 0.58                 | Good                         | Excellent                 |
| Two-Way Stop Control | E-W   |                   |     |                   |     |               |     |                  |     | --                 | 0.27 | 0.27                 | Fair                         | Good                      |
| All-Way Stop Control | FULL  |                   |     |                   |     |               |     |                  |     | 1833               | 1.53 | 1.53                 | Good                         | Excellent                 |
| Continuous Green T   | W     |                   |     |                   |     |               |     |                  |     | 7                  | 0.00 | 0.00                 | Good                         | Excellent                 |
|                      | N     |                   |     |                   |     |               |     |                  |     | 489                | 0.28 | 0.28                 | Good                         | Excellent                 |
|                      | E     |                   |     |                   |     |               |     |                  |     | 3                  | 0.00 | 0.00                 | Good                         | Excellent                 |
|                      | S     |                   |     |                   |     |               |     |                  |     | 425                | 0.24 | 0.24                 | Good                         | Excellent                 |

## Results for Grade Separated Intersections

| TYPE OF INTERSECTION | Sheet | Zone 1<br>(North) |     | Zone 2<br>(South) |     | Zone 3<br>(East) |     | Zone 4<br>(West) |     | Zone 5<br>(Center) |     | Zone 6<br>(Raised) |     | Overall v/c<br>Ratio | Ped | Bicycle |
|----------------------|-------|-------------------|-----|-------------------|-----|------------------|-----|------------------|-----|--------------------|-----|--------------------|-----|----------------------|-----|---------|
|                      |       | CLV               | V/C | CLV               | V/C | CLV              | V/C | CLV              | V/C | CLV                | V/C | CLV                | V/C |                      |     |         |

# Capacity Analysis for Planning of Junctions

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## Results for Roundabouts

| TYPE OF ROUNDABOUT | Zone 1 (North) |        |        | Zone 3 (East) |        |        | Zone 2 (South) |        |        | Zone 4 (West) |        |        | Overall v/c Ratio | Pedestrian Accommodations | Bicycle Accommodations |
|--------------------|----------------|--------|--------|---------------|--------|--------|----------------|--------|--------|---------------|--------|--------|-------------------|---------------------------|------------------------|
|                    | Lane 1         | Lane 2 | Lane 3 | Lane 1        | Lane 2 | Lane 3 | Lane 1         | Lane 2 | Lane 3 | Lane 1        | Lane 2 | Lane 3 |                   |                           |                        |

## Results for Interchanges

| Results for Interchanges |       |                    |     |                    |     |                    |     |                    |     |                    |     |                    |     |                   |                           |                        |
|--------------------------|-------|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|-------------------|---------------------------|------------------------|
| TYPE OF INTERCHANGE      | Sheet | Zone 1<br>(Rt Mrg) |     | Zone 2<br>(Lt Mrg) |     | Zone 3<br>(Ctr. 1) |     | Zone 4<br>(Ctr. 2) |     | Zone 5<br>(Lt Mrg) |     | Zone 6<br>(Rt Mrg) |     | Overall v/c Ratio | Pedestrian Accommodations | Bicycle Accommodations |
|                          |       | CLV                | V/C |                   |                           |                        |



# Appendix E: Detailed LOS Synchro Reports

## HCM 6th TWSC

## 4: Osmond Street/Baptist Church Access &amp; Bastanchury Road

Existing AM (1 Access; TWLTL)

## Intersection

Int Delay, s/veh

0

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↖    |      | ↖    | ↖    | ↖    | ↖    | ↖    |
| Traffic Vol, veh/h       | 0    | 696  | 0    | 0    | 804  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Future Vol, veh/h        | 0    | 696  | 0    | 0    | 804  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 870  | 0    | 0    | 1005 | 0    | 1    | 0    | 3    | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 870    | 0 | 0      | 1373 | 1875 | 435  | 1440 | 1875 | 503  |
| Stage 1              | -      | -      | - | -      | - | -      | 870  | 870  | -    | 1005 | 1005 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 503  | 1005 | -    | 435  | 870  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 770    | - | -      | 105  | 71   | 569  | 93   | 71   | 514  |
| Stage 1              | 0      | -      | - | -      | - | -      | 313  | 367  | -    | 259  | 317  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 519  | 317  | -    | 570  | 367  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 770    | - | -      | 105  | 71   | 569  | 93   | 71   | 514  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 222  | 187  | -    | 197  | 187  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 313  | 367  | -    | 259  | 317  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 518  | 317  | -    | 567  | 367  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB  |     |       |
|-----------------------|-------|-------|-----|------|-----|-----|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 14.7 |     | 12  |     |       |
| HCM LOS               |       |       |     | B    |     | B   |     |       |
| <hr/>                 |       |       |     |      |     |     |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT | WBR | SBLn1 |
| Capacity (veh/h)      | 222   | 569   | -   | -    | 770 | -   | -   | 514   |
| HCM Lane V/C Ratio    | 0.006 | 0.004 | -   | -    | -   | -   | -   | 0.002 |
| HCM Control Delay (s) | 21.3  | 11.4  | -   | -    | 0   | -   | -   | 12    |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -    | 0   | -   | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↗    |      | ↖    | ↗    |      | ↖    | ↗    |
| Traffic Vol, veh/h       | 0    | 802  | 2    | 2    | 548  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Future Vol, veh/h        | 0    | 802  | 2    | 2    | 548  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 844  | 2    | 2    | 577  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 846    | 0 | 0      | 1137 | 1430 | 422  | 1003 | 1427 | 289  |
| Stage 1              | -      | -      | - | -      | - | -      | 844  | 844  | -    | 581  | 581  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 293  | 586  | -    | 422  | 846  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 787    | - | -      | 157  | 133  | 580  | 196  | 134  | 708  |
| Stage 1              | 0      | -      | - | -      | - | -      | 324  | 377  | -    | 467  | 498  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 691  | 495  | -    | 580  | 377  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 787    | - | -      | 157  | 133  | 580  | 196  | 134  | 708  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 259  | 254  | -    | 324  | 255  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 324  | 377  | -    | 467  | 497  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 689  | 494  | -    | 580  | 377  | -    |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 19.1 |       | 16.1 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 259   | -     | -   | -    | 787   | -    | -   | 324   |
| HCM Lane V/C Ratio    | 0.012 | -     | -   | -    | 0.003 | -    | -   | 0.003 |
| HCM Control Delay (s) | 19.1  | 0     | -   | -    | 9.6   | -    | -   | 16.1  |
| HCM Lane LOS          | C     | A     | -   | -    | A     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0     | -     | -   | -    | 0     | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑↑   | ↑    | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 698  | 0    | 0    | 813  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Future Vol, veh/h        | 0    | 698  | 0    | 0    | 813  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 873  | 0    | 0    | 1016 | 0    | 1    | 0    | 3    | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 873    | 0 | 0      | 1381 | 1889 | 437  | 1453 | 1889 | 508  |
| Stage 1              | -      | -      | - | -      | - | -      | 873  | 873  | -    | 1016 | 1016 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 508  | 1016 | -    | 437  | 873  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 768    | - | -      | 103  | 70   | 567  | 91   | 70   | 510  |
| Stage 1              | 0      | -      | - | -      | - | -      | 311  | 366  | -    | 255  | 314  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 516  | 314  | -    | 568  | 366  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 768    | - | -      | 103  | 70   | 567  | 91   | 70   | 510  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 220  | 186  | -    | 194  | 186  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 311  | 366  | -    | 255  | 314  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 515  | 314  | -    | 565  | 366  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB   |     |       |
|-----------------------|-------|-------|-----|------|-----|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 14.8 |     | 12.1 |     |       |
| HCM LOS               |       |       |     | B    |     | B    |     |       |
| <hr/>                 |       |       |     |      |     |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 220   | 567   | -   | -    | 768 | -    | -   | 510   |
| HCM Lane V/C Ratio    | 0.006 | 0.004 | -   | -    | -   | -    | -   | 0.002 |
| HCM Control Delay (s) | 21.5  | 11.4  | -   | -    | 0   | -    | -   | 12.1  |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -    | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -    | 0   | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↗    |      | ↖    | ↗    |      | ↖    | ↗    |
| Traffic Vol, veh/h       | 0    | 808  | 2    | 2    | 555  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Future Vol, veh/h        | 0    | 808  | 2    | 2    | 555  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 851  | 2    | 2    | 584  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 853    | 0 | 0      | 1147 | 1444 | 426  | 1014 | 1441 | 292  |
| Stage 1              | -      | -      | - | -      | - | -      | 851  | 851  | -    | 588  | 588  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 296  | 593  | -    | 426  | 853  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 782    | - | -      | 154  | 131  | 577  | 193  | 131  | 704  |
| Stage 1              | 0      | -      | - | -      | - | -      | 321  | 375  | -    | 462  | 494  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 688  | 492  | -    | 577  | 374  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 782    | - | -      | 154  | 131  | 577  | 193  | 131  | 704  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 257  | 252  | -    | 320  | 252  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 321  | 375  | -    | 462  | 493  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 686  | 491  | -    | 577  | 374  | -    |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 19.2 |       | 16.3 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 257   | -     | -   | -    | 782   | -    | -   | 320   |
| HCM Lane V/C Ratio    | 0.012 | -     | -   | -    | 0.003 | -    | -   | 0.003 |
| HCM Control Delay (s) | 19.2  | 0     | -   | -    | 9.6   | -    | -   | 16.3  |
| HCM Lane LOS          | C     | A     | -   | -    | A     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0     | -     | -   | -    | 0     | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↖    |      | ↖    | ↖    | ↖    | ↖    | ↖    |
| Traffic Vol, veh/h       | 0    | 707  | 0    | 0    | 817  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Future Vol, veh/h        | 0    | 707  | 0    | 0    | 817  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 884  | 0    | 0    | 1021 | 0    | 3    | 0    | 4    | 0    | 0    | 3    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 884    | 0 | 0      | 1395 | 1905 |
| Stage 1              | -      | -      | - | -      | - | -      | 884  | 884  |
| Stage 2              | -      | -      | - | -      | - | -      | 511  | 1021 |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 761    | - | -      | 101  | 68   |
| Stage 1              | 0      | -      | - | -      | - | -      | 307  | 362  |
| Stage 2              | 0      | -      | - | -      | - | -      | 514  | 312  |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 761    | - | -      | 100  | 68   |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 217  | 184  |
| Stage 1              | -      | -      | - | -      | - | -      | 307  | 362  |
| Stage 2              | -      | -      | - | -      | - | -      | 511  | 312  |

| Approach              | EB    | WB    |     | NB   |     | SB   |     |       |
|-----------------------|-------|-------|-----|------|-----|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 15.6 |     | 12.1 |     |       |
| HCM LOS               |       |       |     | C    |     | B    |     |       |
| <hr/>                 |       |       |     |      |     |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 217   | 563   | -   | -    | 761 | -    | -   | 508   |
| HCM Lane V/C Ratio    | 0.012 | 0.007 | -   | -    | -   | -    | -   | 0.005 |
| HCM Control Delay (s) | 21.8  | 11.4  | -   | -    | 0   | -    | -   | 12.1  |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -    | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -    | 0   | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↗    |      | ↖    | ↗    |      | ↖    |      |
| Traffic Vol, veh/h       | 0    | 815  | 3    | 3    | 557  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Future Vol, veh/h        | 0    | 815  | 3    | 3    | 557  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 858  | 3    | 3    | 586  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 861    | 0 | 0      | 1157 | 1456 | 429  | 1021 | 1453 | 293  |
| Stage 1              | -      | -      | - | -      | - | -      | 858  | 858  | -    | 592  | 592  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 299  | 598  | -    | 429  | 861  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 776    | - | -      | 151  | 129  | 574  | 191  | 129  | 703  |
| Stage 1              | 0      | -      | - | -      | - | -      | 318  | 372  | -    | 460  | 492  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 685  | 489  | -    | 574  | 371  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 776    | - | -      | 151  | 128  | 574  | 190  | 128  | 703  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 254  | 249  | -    | 318  | 249  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 318  | 372  | -    | 460  | 490  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 682  | 487  | -    | 574  | 371  | -    |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0.1   |     | 19.4 |       | 16.4 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 254   | -     | -   | -    | 776   | -    | -   | 318   |
| HCM Lane V/C Ratio    | 0.017 | -     | -   | -    | 0.004 | -    | -   | 0.007 |
| HCM Control Delay (s) | 19.4  | 0     | -   | -    | 9.7   | -    | -   | 16.4  |
| HCM Lane LOS          | C     | A     | -   | -    | A     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -     | -   | -    | 0     | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↖    |      | ↖    | ↖    | ↖    | ↖    | ↖    |
| Traffic Vol, veh/h       | 0    | 709  | 0    | 0    | 826  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Future Vol, veh/h        | 0    | 709  | 0    | 0    | 826  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 886  | 0    | 0    | 1033 | 0    | 3    | 0    | 4    | 0    | 0    | 3    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 886    | 0 | 0      | 1403 | 1919 | 443  | 1476 | 1919 | 517  |
| Stage 1              | -      | -      | - | -      | - | -      | 886  | 886  | -    | 1033 | 1033 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 517  | 1033 | -    | 443  | 886  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 760    | - | -      | 100  | 67   | 562  | 88   | 67   | 503  |
| Stage 1              | 0      | -      | - | -      | - | -      | 306  | 361  | -    | 249  | 308  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 509  | 308  | -    | 564  | 361  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 760    | - | -      | 100  | 67   | 562  | 87   | 67   | 503  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 216  | 182  | -    | 190  | 182  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 306  | 361  | -    | 249  | 308  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 506  | 308  | -    | 560  | 361  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB   |     |       |
|-----------------------|-------|-------|-----|------|-----|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 15.6 |     | 12.2 |     |       |
| HCM LOS               |       |       |     | C    |     | B    |     |       |
| <hr/>                 |       |       |     |      |     |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 216   | 562   | -   | -    | 760 | -    | -   | 503   |
| HCM Lane V/C Ratio    | 0.012 | 0.007 | -   | -    | -   | -    | -   | 0.005 |
| HCM Control Delay (s) | 21.9  | 11.4  | -   | -    | 0   | -    | -   | 12.2  |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -    | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -    | 0   | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↓↓   |
| Traffic Vol, veh/h       | 0    | 821  | 3    | 3    | 564  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Future Vol, veh/h        | 0    | 821  | 3    | 3    | 564  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 864  | 3    | 3    | 594  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 867    | 0 | 0      | 1167 | 1470 | 432  | 1032 | 1467 | 297  |
| Stage 1              | -      | -      | - | -      | - | -      | 864  | 864  | -    | 600  | 600  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 303  | 606  | -    | 432  | 867  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 772    | - | -      | 149  | 126  | 572  | 187  | 127  | 699  |
| Stage 1              | 0      | -      | - | -      | - | -      | 315  | 369  | -    | 455  | 488  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 681  | 485  | -    | 572  | 368  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 772    | - | -      | 149  | 125  | 572  | 186  | 126  | 699  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 251  | 247  | -    | 314  | 246  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 315  | 369  | -    | 455  | 486  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 678  | 483  | -    | 572  | 368  | -    |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0.1   |     | 19.6 |       | 16.5 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 251   | -     | -   | -    | 772   | -    | -   | 314   |
| HCM Lane V/C Ratio    | 0.017 | -     | -   | -    | 0.004 | -    | -   | 0.007 |
| HCM Control Delay (s) | 19.6  | 0     | -   | -    | 9.7   | -    | -   | 16.5  |
| HCM Lane LOS          | C     | A     | -   | -    | A     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -     | -   | -    | 0     | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↓↓   |
| Traffic Vol, veh/h       | 0    | 820  | 0    | 0    | 945  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Future Vol, veh/h        | 0    | 820  | 0    | 0    | 945  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 891  | 0    | 0    | 1027 | 0    | 5    | 0    | 5    | 0    | 0    | 5    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 891    | 0 | 0      | 1405 | 1918 | 446  | 1473 | 1918 | 514  |
| Stage 1              | -      | -      | - | -      | - | -      | 891  | 891  | -    | 1027 | 1027 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 514  | 1027 | -    | 446  | 891  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 757    | - | -      | 99   | 67   | 560  | 88   | 67   | 505  |
| Stage 1              | 0      | -      | - | -      | - | -      | 304  | 359  | -    | 251  | 310  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 511  | 310  | -    | 561  | 359  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 757    | - | -      | 98   | 67   | 560  | 87   | 67   | 505  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 214  | 182  | -    | 190  | 182  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 304  | 359  | -    | 251  | 310  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 506  | 310  | -    | 556  | 359  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB   |     |       |
|-----------------------|-------|-------|-----|------|-----|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 16.9 |     | 12.2 |     |       |
| HCM LOS               |       |       |     | C    |     | B    |     |       |
| <hr/>                 |       |       |     |      |     |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 214   | 560   | -   | -    | 757 | -    | -   | 505   |
| HCM Lane V/C Ratio    | 0.025 | 0.01  | -   | -    | -   | -    | -   | 0.011 |
| HCM Control Delay (s) | 22.3  | 11.5  | -   | -    | 0   | -    | -   | 12.2  |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -    | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -    | 0   | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↗    | ↖    | ↑↑   | ↗    |      | ↖    | ↗    |      | ↖    |      |
| Traffic Vol, veh/h       | 0    | 945  | 5    | 5    | 645  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Future Vol, veh/h        | 0    | 945  | 5    | 5    | 645  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1027 | 5    | 5    | 701  | 11   | 5    | 0    | 0    | 5    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 1032   | 0 | 0      | 1388 | 1749 |
| Stage 1              | -      | -      | - | -      | - | -      | 1027 | 1027 |
| Stage 2              | -      | -      | - | -      | - | -      | 361  | 722  |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 669    | - | -      | 102  | 85   |
| Stage 1              | 0      | -      | - | -      | - | -      | 251  | 310  |
| Stage 2              | 0      | -      | - | -      | - | -      | 630  | 429  |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 669    | - | -      | 101  | 84   |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 199  | 201  |
| Stage 1              | -      | -      | - | -      | - | -      | 251  | 310  |
| Stage 2              | -      | -      | - | -      | - | -      | 625  | 426  |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0.1   |     | 23.6 |       | 19.1 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 199   | -     | -   | -    | 669   | -    | -   | 261   |
| HCM Lane V/C Ratio    | 0.027 | -     | -   | -    | 0.008 | -    | -   | 0.021 |
| HCM Control Delay (s) | 23.6  | 0     | -   | -    | 10.4  | -    | -   | 19.1  |
| HCM Lane LOS          | C     | A     | -   | -    | B     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -     | -   | -    | 0     | -    | -   | 0.1   |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↓↓   |
| Traffic Vol, veh/h       | 0    | 822  | 0    | 0    | 954  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Future Vol, veh/h        | 0    | 822  | 0    | 0    | 954  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 893  | 0    | 0    | 1037 | 0    | 5    | 0    | 5    | 0    | 0    | 5    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 893    | 0 | 0      | 1412 | 1930 | 447  | 1484 | 1930 | 519  |
| Stage 1              | -      | -      | - | -      | - | -      | 893  | 893  | -    | 1037 | 1037 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 519  | 1037 | -    | 447  | 893  | -    |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 755    | - | -      | 98   | 66   | 559  | 87   | 66   | 502  |
| Stage 1              | 0      | -      | - | -      | - | -      | 303  | 358  | -    | 247  | 307  | -    |
| Stage 2              | 0      | -      | - | -      | - | -      | 508  | 307  | -    | 560  | 358  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 755    | - | -      | 97   | 66   | 559  | 86   | 66   | 502  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 213  | 181  | -    | 188  | 181  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 303  | 358  | -    | 247  | 307  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 503  | 307  | -    | 555  | 358  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB   |     |       |
|-----------------------|-------|-------|-----|------|-----|------|-----|-------|
| HCM Control Delay, s  | 0     | 0     |     | 16.9 |     | 12.3 |     |       |
| HCM LOS               |       |       |     | C    |     | B    |     |       |
| <hr/>                 |       |       |     |      |     |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 213   | 559   | -   | -    | 755 | -    | -   | 502   |
| HCM Lane V/C Ratio    | 0.026 | 0.01  | -   | -    | -   | -    | -   | 0.011 |
| HCM Control Delay (s) | 22.3  | 11.5  | -   | -    | 0   | -    | -   | 12.3  |
| HCM Lane LOS          | C     | B     | -   | -    | A   | -    | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -    | 0   | -    | -   | 0     |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↑↑   | ↖    | ↖    | ↑↑   | ↗    |      | ↖    | ↗    |      | ↖    | ↗    |
| Traffic Vol, veh/h       | 0    | 951  | 5    | 5    | 652  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Future Vol, veh/h        | 0    | 951  | 5    | 5    | 652  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | -    | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1034 | 5    | 5    | 709  | 11   | 5    | 0    | 0    | 5    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | -      | 0      | 0 | 1039   | 0 | 0      | 1399 | 1764 |
| Stage 1              | -      | -      | - | -      | - | -      | 1034 | 1034 |
| Stage 2              | -      | -      | - | -      | - | -      | 365  | 730  |
| Critical Hdwy        | -      | -      | - | 4.14   | - | -      | 7.54 | 6.54 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Follow-up Hdwy       | -      | -      | - | 2.22   | - | -      | 3.52 | 4.02 |
| Pot Cap-1 Maneuver   | 0      | -      | - | 665    | - | -      | 100  | 83   |
| Stage 1              | 0      | -      | - | -      | - | -      | 248  | 308  |
| Stage 2              | 0      | -      | - | -      | - | -      | 627  | 426  |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | - | 665    | - | -      | 99   | 82   |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 196  | 199  |
| Stage 1              | -      | -      | - | -      | - | -      | 248  | 308  |
| Stage 2              | -      | -      | - | -      | - | -      | 622  | 423  |

| Approach              | EB    | WB    |     | NB   |       | SB   |     |       |
|-----------------------|-------|-------|-----|------|-------|------|-----|-------|
| HCM Control Delay, s  | 0     | 0.1   |     | 23.9 |       | 19.3 |     |       |
| HCM LOS               |       |       |     | C    |       | C    |     |       |
| <hr/>                 |       |       |     |      |       |      |     |       |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR  | WBL   | WBT  | WBR | SBLn1 |
| Capacity (veh/h)      | 196   | -     | -   | -    | 665   | -    | -   | 258   |
| HCM Lane V/C Ratio    | 0.028 | -     | -   | -    | 0.008 | -    | -   | 0.021 |
| HCM Control Delay (s) | 23.9  | 0     | -   | -    | 10.5  | -    | -   | 19.3  |
| HCM Lane LOS          | C     | A     | -   | -    | B     | -    | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -     | -   | -    | 0     | -    | -   | 0.1   |

## HCM 6th TWSC

## 4: Osmond Street/Baptist Church Access &amp; Bastanchury Road

Existing AM (1 Access)

## Intersection

Int Delay, s/veh

0

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑    | ↑    |      | ↑    |      |
| Traffic Vol, veh/h       | 1    | 696  | 0    | 0    | 804  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Future Vol, veh/h        | 1    | 696  | 0    | 0    | 804  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1    | 870  | 0    | 0    | 1005 | 0    | 1    | 0    | 3    | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | 1005   | 0      | 0 | 870    | 0 | 0      | 1375 | 1877 |
| Stage 1              | -      | -      | - | -      | - | -      | 872  | 872  |
| Stage 2              | -      | -      | - | -      | - | -      | 503  | 1005 |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 |
| Pot Cap-1 Maneuver   | 685    | -      | - | 770    | - | -      | 104  | 71   |
| Stage 1              | -      | -      | - | -      | - | -      | 312  | 366  |
| Stage 2              | -      | -      | - | -      | - | -      | 519  | 317  |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | 685    | -      | - | 770    | - | -      | 104  | 71   |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 104  | 71   |
| Stage 1              | -      | -      | - | -      | - | -      | 312  | 366  |
| Stage 2              | -      | -      | - | -      | - | -      | 518  | 317  |

| Approach              | EB    | WB    |       | NB   |     | SB  |     |           |
|-----------------------|-------|-------|-------|------|-----|-----|-----|-----------|
| HCM Control Delay, s  | 0     | 0     |       | 20.9 |     | 12  |     |           |
| HCM LOS               |       |       |       | C    |     | B   |     |           |
| <hr/>                 |       |       |       |      |     |     |     |           |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT  | EBR | WBL | WBT | WBR SBLn1 |
| Capacity (veh/h)      | 104   | 569   | 685   | -    | -   | 770 | -   | -         |
| HCM Lane V/C Ratio    | 0.012 | 0.004 | 0.002 | -    | -   | -   | -   | 0.002     |
| HCM Control Delay (s) | 40    | 11.4  | 10.3  | -    | -   | 0   | -   | -         |
| HCM Lane LOS          | E     | B     | B     | -    | -   | A   | -   | -         |
| HCM 95th %tile Q(veh) | 0     | 0     | 0     | -    | -   | 0   | -   | -         |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑↑   | ↑    | ↑    | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 802  | 2    | 2    | 548  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Future Vol, veh/h        | 0    | 802  | 2    | 2    | 548  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 844  | 2    | 2    | 577  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 582    | 0      | 0 | 846    | 0 | 0      | 1137 | 1430 | 422  | 1003 | 1427 | 289  |
| Stage 1              | -      | -      | - | -      | - | -      | 844  | 844  | -    | 581  | 581  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 293  | 586  | -    | 422  | 846  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 988    | -      | - | 787    | - | -      | 157  | 133  | 580  | 196  | 134  | 708  |
| Stage 1              | -      | -      | - | -      | - | -      | 324  | 377  | -    | 467  | 498  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 691  | 495  | -    | 580  | 377  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 988    | -      | - | 787    | - | -      | 157  | 133  | 580  | 196  | 134  | 708  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 157  | 133  | -    | 196  | 134  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 324  | 377  | -    | 467  | 497  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 689  | 494  | -    | 580  | 377  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB    |     |     |       |  |  |
|-----------------------|-------|-------|-----|------|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0     |     | 28.4 |     | 23.5  |     |     |       |  |  |
| HCM LOS               |       |       |     | D    |     | C     |     |     |       |  |  |
| <hr/>                 |       |       |     |      |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 157   | -     | 988 | -    | -   | 787   | -   | -   | 196   |  |  |
| HCM Lane V/C Ratio    | 0.02  | -     | -   | -    | -   | 0.003 | -   | -   | 0.005 |  |  |
| HCM Control Delay (s) | 28.4  | 0     | 0   | -    | -   | 9.6   | -   | -   | 23.5  |  |  |
| HCM Lane LOS          | D     | A     | A   | -    | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -    | -   | 0     | -   | -   | 0     |  |  |

## HCM 6th TWSC

## 4: Osmond Street/Baptist Church Access &amp; Bastanchury Road

Existing+P AM (1 Access)

## Intersection

Int Delay, s/veh

0

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑    | ↑    | ↑    | ↑    | ↓    |
| Traffic Vol, veh/h       | 1    | 698  | 0    | 0    | 813  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Future Vol, veh/h        | 1    | 698  | 0    | 0    | 813  | 0    | 1    | 0    | 2    | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1    | 873  | 0    | 0    | 1016 | 0    | 1    | 0    | 3    | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|
| Conflicting Flow All | 1016   | 0      | 0 | 873    | 0 | 0      | 1383 | 1891 |
| Stage 1              | -      | -      | - | -      | - | -      | 875  | 875  |
| Stage 2              | -      | -      | - | -      | - | -      | 508  | 1016 |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 |
| Pot Cap-1 Maneuver   | 678    | -      | - | 768    | - | -      | 103  | 69   |
| Stage 1              | -      | -      | - | -      | - | -      | 310  | 365  |
| Stage 2              | -      | -      | - | -      | - | -      | 516  | 314  |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | 678    | -      | - | 768    | - | -      | 103  | 69   |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 103  | 69   |
| Stage 1              | -      | -      | - | -      | - | -      | 310  | 365  |
| Stage 2              | -      | -      | - | -      | - | -      | 515  | 314  |

| Approach              | EB    | WB    |       | NB   |     | SB   |     |           |
|-----------------------|-------|-------|-------|------|-----|------|-----|-----------|
| HCM Control Delay, s  | 0     | 0     |       | 21.1 |     | 12.1 |     |           |
| HCM LOS               |       |       |       | C    |     | B    |     |           |
| <hr/>                 |       |       |       |      |     |      |     |           |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT  | EBR | WBL  | WBT | WBR SBLn1 |
| Capacity (veh/h)      | 103   | 567   | 678   | -    | -   | 768  | -   | -         |
| HCM Lane V/C Ratio    | 0.012 | 0.004 | 0.002 | -    | -   | -    | -   | 0.002     |
| HCM Control Delay (s) | 40.4  | 11.4  | 10.3  | -    | -   | 0    | -   | 12.1      |
| HCM Lane LOS          | E     | B     | B     | -    | -   | A    | -   | -         |
| HCM 95th %tile Q(veh) | 0     | 0     | 0     | -    | -   | 0    | -   | 0         |

## HCM 6th TWSC

## 4: Osmond Street/Baptist Church Access &amp; Bastanchury Road

Existing+P PM (1 Access)

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗    | ↖ ↗  | ↑ ↗  | ↗    | ↙ ↗  | ↖ ↗  | ↗    | ↙ ↗  | ↖ ↗  | ↙ ↗  |
| Traffic Vol, veh/h       | 0    | 808  | 2    | 2    | 555  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Future Vol, veh/h        | 0    | 808  | 2    | 2    | 555  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 851  | 2    | 2    | 584  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 589    | 0      | 0 | 853    | 0 | 0      | 1147 | 1444 | 426  | 1014 | 1441 | 292  |
| Stage 1              | -      | -      | - | -      | - | -      | 851  | 851  | -    | 588  | 588  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 296  | 593  | -    | 426  | 853  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 982    | -      | - | 782    | - | -      | 154  | 131  | 577  | 193  | 131  | 704  |
| Stage 1              | -      | -      | - | -      | - | -      | 321  | 375  | -    | 462  | 494  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 688  | 492  | -    | 577  | 374  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 982    | -      | - | 782    | - | -      | 154  | 131  | 577  | 193  | 131  | 704  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 154  | 131  | -    | 193  | 131  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 321  | 375  | -    | 462  | 493  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 686  | 491  | -    | 577  | 374  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB    |     |     |       |  |  |
|-----------------------|-------|-------|-----|------|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0     |     | 28.9 |     | 23.8  |     |     |       |  |  |
| HCM LOS               |       |       |     | D    |     | C     |     |     |       |  |  |
| <hr/>                 |       |       |     |      |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 154   | -     | 982 | -    | -   | 782   | -   | -   | 193   |  |  |
| HCM Lane V/C Ratio    | 0.021 | -     | -   | -    | -   | 0.003 | -   | -   | 0.005 |  |  |
| HCM Control Delay (s) | 28.9  | 0     | 0   | -    | -   | 9.6   | -   | -   | 23.8  |  |  |
| HCM Lane LOS          | D     | A     | A   | -    | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -    | -   | 0     | -   | -   | 0     |  |  |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↖ ↗  | ↑ ↗  | ↗ ↗  | ↙ ↗  | ↖ ↗  | ↗ ↗  | ↙ ↗  | ↖ ↗  | ↙ ↗  |
| Traffic Vol, veh/h       | 2    | 707  | 0    | 0    | 817  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Future Vol, veh/h        | 2    | 707  | 0    | 0    | 817  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 884  | 0    | 0    | 1021 | 0    | 3    | 0    | 4    | 0    | 0    | 3    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 1021   | 0      | 0 | 884  | 0      | 0 | 1401 | 1911   | 442  | 1469 | 1911 | 511  |
| Stage 1              | -      | -      | - | -    | -      | - | 890  | 890    | -    | 1021 | 1021 | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 511  | 1021   | -    | 448  | 890  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 675    | -      | - | 761  | -      | - | 100  | 67     | 563  | 89   | 67   | 508  |
| Stage 1              | -      | -      | - | -    | -      | - | 304  | 359    | -    | 253  | 312  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 514  | 312    | -    | 560  | 359  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 675    | -      | - | 761  | -      | - | 99   | 67     | 563  | 88   | 67   | 508  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 99   | 67     | -    | 88   | 67   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 303  | 358    | -    | 252  | 312  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 511  | 312    | -    | 554  | 358  | -    |

| Approach              | EB    | WB    |       |     | NB   |     |     | SB   |     |       |  |
|-----------------------|-------|-------|-------|-----|------|-----|-----|------|-----|-------|--|
| HCM Control Delay, s  | 0     | 0     |       |     | 23.8 |     |     | 12.1 |     |       |  |
| HCM LOS               |       |       |       |     | C    |     |     | B    |     |       |  |
| Minor Lane/Major Mvmt |       | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL | WBT  | WBR | SBLn1 |  |
| Capacity (veh/h)      | 99    | 563   | 675   | -   | -    | -   | 761 | -    | -   | 508   |  |
| HCM Lane V/C Ratio    | 0.025 | 0.007 | 0.004 | -   | -    | -   | -   | -    | -   | 0.005 |  |
| HCM Control Delay (s) | 42.3  | 11.4  | 10.4  | -   | -    | -   | 0   | -    | -   | 12.1  |  |
| HCM Lane LOS          | E     | B     | B     | -   | -    | -   | A   | -    | -   | B     |  |
| HCM 95th %tile Q(veh) | 0.1   | 0     | 0     | -   | -    | -   | 0   | -    | -   | 0     |  |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑↑   | ↑    |      | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 815  | 3    | 3    | 557  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Future Vol, veh/h        | 0    | 815  | 3    | 3    | 557  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 858  | 3    | 3    | 586  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 592    | 0      | 0 | 861    | 0 | 0      | 1157 | 1456 | 429  | 1021 | 1453 | 293  |
| Stage 1              | -      | -      | - | -      | - | -      | 858  | 858  | -    | 592  | 592  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 299  | 598  | -    | 429  | 861  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 980    | -      | - | 776    | - | -      | 151  | 128  | 574  | 191  | 129  | 703  |
| Stage 1              | -      | -      | - | -      | - | -      | 318  | 372  | -    | 460  | 492  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 685  | 489  | -    | 574  | 371  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 980    | -      | - | 776    | - | -      | 151  | 128  | 574  | 190  | 128  | 703  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 151  | 128  | -    | 190  | 128  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 318  | 372  | -    | 460  | 490  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 682  | 487  | -    | 574  | 371  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB    |     |     |       |  |  |
|-----------------------|-------|-------|-----|------|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   |     | 29.5 |     | 24.2  |     |     |       |  |  |
| HCM LOS               |       |       |     | D    |     | C     |     |     |       |  |  |
| <hr/>                 |       |       |     |      |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 151   | -     | 980 | -    | -   | 776   | -   | -   | 190   |  |  |
| HCM Lane V/C Ratio    | 0.028 | -     | -   | -    | -   | 0.004 | -   | -   | 0.011 |  |  |
| HCM Control Delay (s) | 29.5  | 0     | 0   | -    | -   | 9.7   | -   | -   | 24.2  |  |  |
| HCM Lane LOS          | D     | A     | A   | -    | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -    | -   | 0     | -   | -   | 0     |  |  |

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↖ ↗  | ↑ ↗  | ↗ ↗  | ↙ ↗  | ↖ ↗  | ↗ ↗  | ↙ ↗  | ↖ ↗  | ↙ ↗  |
| Traffic Vol, veh/h       | 2    | 709  | 0    | 0    | 826  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Future Vol, veh/h        | 2    | 709  | 0    | 0    | 826  | 0    | 2    | 0    | 3    | 0    | 0    | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   | 80   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 886  | 0    | 0    | 1033 | 0    | 3    | 0    | 4    | 0    | 0    | 3    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 1033   | 0      | 0 | 886    | 0 | 0      | 1409 | 1925 | 443  | 1482 | 1925 | 517  |
| Stage 1              | -      | -      | - | -      | - | -      | 892  | 892  | -    | 1033 | 1033 | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 517  | 1033 | -    | 449  | 892  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 668    | -      | - | 760    | - | -      | 99   | 66   | 562  | 87   | 66   | 503  |
| Stage 1              | -      | -      | - | -      | - | -      | 303  | 358  | -    | 249  | 308  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 509  | 308  | -    | 559  | 358  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 668    | -      | - | 760    | - | -      | 98   | 66   | 562  | 86   | 66   | 503  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 98   | 66   | -    | 86   | 66   | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 302  | 357  | -    | 248  | 308  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 506  | 308  | -    | 553  | 357  | -    |

| Approach              | EB    | WB    |       | NB   |     | SB   |     |     |       |  |  |  |
|-----------------------|-------|-------|-------|------|-----|------|-----|-----|-------|--|--|--|
| HCM Control Delay, s  | 0     | 0     |       | 23.9 |     | 12.2 |     |     |       |  |  |  |
| HCM LOS               |       |       |       | C    |     | B    |     |     |       |  |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT  | EBR | WBL  | WBT | WBR | SBLn1 |  |  |  |
| Capacity (veh/h)      | 98    | 562   | 668   | -    | -   | 760  | -   | -   | 503   |  |  |  |
| HCM Lane V/C Ratio    | 0.026 | 0.007 | 0.004 | -    | -   | -    | -   | -   | 0.005 |  |  |  |
| HCM Control Delay (s) | 42.7  | 11.4  | 10.4  | -    | -   | 0    | -   | -   | 12.2  |  |  |  |
| HCM Lane LOS          | E     | B     | B     | -    | -   | A    | -   | -   | B     |  |  |  |
| HCM 95th %tile Q(veh) | 0.1   | 0     | 0     | -    | -   | 0    | -   | -   | 0     |  |  |  |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↖ ↗  | ↑ ↗  | ↗ ↗  |      | ↖ ↗  | ↗ ↗  |      | ↖ ↗  |      |
| Traffic Vol, veh/h       | 0    | 821  | 3    | 3    | 564  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Future Vol, veh/h        | 0    | 821  | 3    | 3    | 564  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 864  | 3    | 3    | 594  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 600    | 0      | 0 | 867    | 0 | 0      | 1167 | 1470 | 432  | 1032 | 1467 | 297  |
| Stage 1              | -      | -      | - | -      | - | -      | 864  | 864  | -    | 600  | 600  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 303  | 606  | -    | 432  | 867  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 973    | -      | - | 772    | - | -      | 149  | 126  | 572  | 187  | 127  | 699  |
| Stage 1              | -      | -      | - | -      | - | -      | 315  | 369  | -    | 455  | 488  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 681  | 485  | -    | 572  | 368  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 973    | -      | - | 772    | - | -      | 149  | 125  | 572  | 186  | 126  | 699  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 149  | 125  | -    | 186  | 126  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 315  | 369  | -    | 455  | 486  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 678  | 483  | -    | 572  | 368  | -    |

| Approach              | EB    | WB    |     | NB   |     | SB    |     |     |       |  |  |
|-----------------------|-------|-------|-----|------|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   |     | 29.9 |     | 24.6  |     |     |       |  |  |
| HCM LOS               |       |       |     | D    |     | C     |     |     |       |  |  |
| <hr/>                 |       |       |     |      |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 149   | -     | 973 | -    | -   | 772   | -   | -   | 186   |  |  |
| HCM Lane V/C Ratio    | 0.028 | -     | -   | -    | -   | 0.004 | -   | -   | 0.011 |  |  |
| HCM Control Delay (s) | 29.9  | 0     | 0   | -    | -   | 9.7   | -   | -   | 24.6  |  |  |
| HCM Lane LOS          | D     | A     | A   | -    | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -    | -   | 0     | -   | -   | 0     |  |  |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  |
| Traffic Vol, veh/h       | 5    | 820  | 0    | 0    | 945  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Future Vol, veh/h        | 5    | 820  | 0    | 0    | 945  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 5    | 891  | 0    | 0    | 1027 | 0    | 5    | 0    | 5    | 0    | 0    | 5    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 1027   | 0      | 0 | 891  | 0      | 0 | 1415 | 1928   | 446  | 1483 | 1928 | 514  |
| Stage 1              | -      | -      | - | -    | -      | - | 901  | 901    | -    | 1027 | 1027 | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 514  | 1027   | -    | 456  | 901  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 672    | -      | - | 757  | -      | - | 97   | 66     | 560  | 87   | 66   | 505  |
| Stage 1              | -      | -      | - | -    | -      | - | 299  | 355    | -    | 251  | 310  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 511  | 310    | -    | 554  | 355  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 672    | -      | - | 757  | -      | - | 95   | 66     | 560  | 86   | 66   | 505  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 95   | 66     | -    | 86   | 66   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 297  | 353    | -    | 249  | 310  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 506  | 310    | -    | 545  | 353  | -    |

| Approach              | EB    | WB    |       |     | NB   |     |     | SB   |     |       |  |
|-----------------------|-------|-------|-------|-----|------|-----|-----|------|-----|-------|--|
| HCM Control Delay, s  | 0.1   | 0     |       |     | 28.4 |     |     | 12.2 |     |       |  |
| HCM LOS               |       |       |       |     | D    |     |     | B    |     |       |  |
| Minor Lane/Major Mvmt |       | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL | WBT  | WBR | SBLn1 |  |
| Capacity (veh/h)      | 95    | 560   | 672   | -   | -    | -   | 757 | -    | -   | 505   |  |
| HCM Lane V/C Ratio    | 0.057 | 0.01  | 0.008 | -   | -    | -   | -   | -    | -   | 0.011 |  |
| HCM Control Delay (s) | 45.2  | 11.5  | 10.4  | -   | -    | -   | 0   | -    | -   | 12.2  |  |
| HCM Lane LOS          | E     | B     | B     | -   | -    | -   | A   | -    | -   | B     |  |
| HCM 95th %tile Q(veh) | 0.2   | 0     | 0     | -   | -    | -   | 0   | -    | -   | 0     |  |

## Intersection

Int Delay, s/veh 0.3

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |      | ↑↑   | ↑    | ↑    | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 945  | 5    | 5    | 645  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Future Vol, veh/h        | 0    | 945  | 5    | 5    | 645  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1027 | 5    | 5    | 701  | 11   | 5    | 0    | 0    | 5    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 712    | 0      | 0 | 1032 | 0      | 0 | 1388 | 1749   | 514  | 1225 | 1743 | 351  |
| Stage 1              | -      | -      | - | -    | -      | - | 1027 | 1027   | -    | 711  | 711  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 361  | 722    | -    | 514  | 1032 | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 884    | -      | - | 669  | -      | - | 102  | 85     | 505  | 135  | 86   | 645  |
| Stage 1              | -      | -      | - | -    | -      | - | 251  | 310    | -    | 390  | 434  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 630  | 429    | -    | 511  | 308  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 884    | -      | - | 669  | -      | - | 101  | 84     | 505  | 134  | 85   | 645  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 101  | 84     | -    | 134  | 85   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 251  | 310    | -    | 390  | 431  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 625  | 426    | -    | 511  | 308  | -    |

| Approach              | EB    | WB    |     |     | NB   |       |     | SB  |       |  |  |
|-----------------------|-------|-------|-----|-----|------|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   |     |     | 42.7 |       |     | 33  |       |  |  |
| HCM LOS               |       |       |     |     | E    |       |     | D   |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR  | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 101   | -     | 884 | -   | -    | 669   | -   | -   | 134   |  |  |
| HCM Lane V/C Ratio    | 0.054 | -     | -   | -   | -    | 0.008 | -   | -   | 0.041 |  |  |
| HCM Control Delay (s) | 42.7  | 0     | 0   | -   | -    | 10.4  | -   | -   | 33    |  |  |
| HCM Lane LOS          | E     | A     | A   | -   | -    | B     | -   | -   | D     |  |  |
| HCM 95th %tile Q(veh) | 0.2   | -     | 0   | -   | -    | 0     | -   | -   | 0.1   |  |  |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↑ ↗  | ↑ ↗  | ↗ ↗  |
| Traffic Vol, veh/h       | 5    | 822  | 0    | 0    | 954  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Future Vol, veh/h        | 5    | 822  | 0    | 0    | 954  | 0    | 5    | 0    | 5    | 0    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 5    | 893  | 0    | 0    | 1037 | 0    | 5    | 0    | 5    | 0    | 0    | 5    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 1037   | 0      | 0 | 893  | 0      | 0 | 1422 | 1940   | 447  | 1494 | 1940 | 519  |
| Stage 1              | -      | -      | - | -    | -      | - | 903  | 903    | -    | 1037 | 1037 | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 519  | 1037   | -    | 457  | 903  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 666    | -      | - | 755  | -      | - | 96   | 65     | 559  | 85   | 65   | 502  |
| Stage 1              | -      | -      | - | -    | -      | - | 299  | 354    | -    | 247  | 307  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 508  | 307    | -    | 553  | 354  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 666    | -      | - | 755  | -      | - | 94   | 64     | 559  | 84   | 64   | 502  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 94   | 64     | -    | 84   | 64   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 297  | 351    | -    | 245  | 307  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 503  | 307    | -    | 544  | 351  | -    |

| Approach              | EB    | WB    |       |     | NB   |     |     | SB   |     |       |  |
|-----------------------|-------|-------|-------|-----|------|-----|-----|------|-----|-------|--|
| HCM Control Delay, s  | 0.1   | 0     |       |     | 28.6 |     |     | 12.3 |     |       |  |
| HCM LOS               |       |       |       |     | D    |     |     | B    |     |       |  |
| Minor Lane/Major Mvmt |       | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL | WBT  | WBR | SBLn1 |  |
| Capacity (veh/h)      | 94    | 559   | 666   | -   | -    | -   | 755 | -    | -   | 502   |  |
| HCM Lane V/C Ratio    | 0.058 | 0.01  | 0.008 | -   | -    | -   | -   | -    | -   | 0.011 |  |
| HCM Control Delay (s) | 45.6  | 11.5  | 10.4  | -   | -    | -   | 0   | -    | -   | 12.3  |  |
| HCM Lane LOS          | E     | B     | B     | -   | -    | -   | A   | -    | -   | B     |  |
| HCM 95th %tile Q(veh) | 0.2   | 0     | 0     | -   | -    | -   | 0   | -    | -   | 0     |  |

## Intersection

Int Delay, s/veh 0.3

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    | ↑    | ↑↑   | ↑    |
| Traffic Vol, veh/h       | 0    | 951  | 5    | 5    | 652  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Future Vol, veh/h        | 0    | 951  | 5    | 5    | 652  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1034 | 5    | 5    | 709  | 11   | 5    | 0    | 0    | 5    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 720    | 0      | 0 | 1039 | 0      | 0 | 1399 | 1764   | 517  | 1236 | 1758 | 355  |
| Stage 1              | -      | -      | - | -    | -      | - | 1034 | 1034   | -    | 719  | 719  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 365  | 730    | -    | 517  | 1039 | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 877    | -      | - | 665  | -      | - | 100  | 83     | 503  | 132  | 84   | 641  |
| Stage 1              | -      | -      | - | -    | -      | - | 248  | 308    | -    | 386  | 431  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 627  | 426    | -    | 509  | 306  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 877    | -      | - | 665  | -      | - | 99   | 82     | 503  | 131  | 83   | 641  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 99   | 82     | -    | 131  | 83   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 248  | 308    | -    | 386  | 428  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 622  | 423    | -    | 509  | 306  | -    |

| Approach              | EB    | WB    |     |     | NB   |       |     | SB   |       |  |  |
|-----------------------|-------|-------|-----|-----|------|-------|-----|------|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   |     |     | 43.5 |       |     | 33.7 |       |  |  |
| HCM LOS               |       |       |     |     | E    |       |     | D    |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR  | WBL   | WBT | WBR  | SBLn1 |  |  |
| Capacity (veh/h)      | 99    | -     | 877 | -   | -    | 665   | -   | -    | 131   |  |  |
| HCM Lane V/C Ratio    | 0.055 | -     | -   | -   | -    | 0.008 | -   | -    | 0.041 |  |  |
| HCM Control Delay (s) | 43.5  | 0     | 0   | -   | -    | 10.5  | -   | -    | 33.7  |  |  |
| HCM Lane LOS          | E     | A     | A   | -   | -    | B     | -   | -    | D     |  |  |
| HCM 95th %tile Q(veh) | 0.2   | -     | 0   | -   | -    | 0     | -   | -    | 0.1   |  |  |



# Appendix F: Detailed LOS Synchro & KICU Reports for Higher Trip Generation Analysis

**Project Title:** LDS Yorba Linda  
**Intersection:** 1 - Valley View Ave & Yorba Linda Blvd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | Y  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 125    | 1,700    | 0.032   | N-S(1): 0.153 * | N-S(2): 0.000    |
|            | TH   | 0.29  | 37     | 499      | 0.074   |                 |                  |
|            | LT   | 1.71  | 215    | 2,321    | 0.093 * |                 |                  |
| Westbound  | RT   | 0.00  | 172    | 0        | 0.000   | E-W(1): 0.170   | E-W(2): 0.265 *  |
|            | TH   | 3.00  | 760    | 5,100    | 0.183 * |                 |                  |
|            | LT   | 1.00  | 44     | 1,700    | 0.026   |                 |                  |
| Northbound | RT   | 0.00  | 21     | 0        | 0.000   | V/C: 0.418      | Lost Time: 0.100 |
|            | TH   | 1.00  | 31     | 1,700    | 0.060 * |                 |                  |
|            | LT   | 0.00  | 50     | 1,700    | 0.029   |                 |                  |
| Eastbound  | RT   | 0.00  | 62     | 0        | 0.000   | ICU: 0.518      | ITS: 0.000       |
|            | TH   | 3.00  | 671    | 5,100    | 0.144   |                 |                  |
|            | LT   | 1.00  | 140    | 1,700    | 0.082 * |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 145    | 1,700    | 0.030   | N-S(1): 0.197 * | N-S(2): 0.000    |
|            | TH   | 0.34  | 44     | 573      | 0.077   |                 |                  |
|            | LT   | 1.66  | 217    | 2,261    | 0.096 * |                 |                  |
| Westbound  | RT   | 0.00  | 245    | 0        | 0.000   | E-W(1): 0.210   | E-W(2): 0.307 *  |
|            | TH   | 3.00  | 760    | 5,100    | 0.197 * |                 |                  |
|            | LT   | 1.00  | 55     | 1,700    | 0.032   |                 |                  |
| Northbound | RT   | 0.00  | 44     | 0        | 0.000   | V/C: 0.504      | Lost Time: 0.100 |
|            | TH   | 1.00  | 44     | 1,700    | 0.101 * |                 |                  |
|            | LT   | 0.00  | 84     | 1,700    | 0.049   |                 |                  |
| Eastbound  | RT   | 0.00  | 82     | 0        | 0.000   | ICU: 0.604      | ITS: 0.000       |
|            | TH   | 3.00  | 825    | 5,100    | 0.178   |                 |                  |
|            | LT   | 1.00  | 187    | 1,700    | 0.110 * |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 2 - Valley View Ave & Imperial Highway  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 2      | 0        | 0.000   | N-S(1):      | 0.133 * |
|            | TH   | 2.00  | 139    | 3,400    | 0.041   | N-S(2):      | 0.102   |
|            | LT   | 1.00  | 139    | 1,700    | 0.082 * | E-W(1):      | 0.338 * |
| Westbound  | RT   | 1.00  | 92     | 1,700    | 0.013   | E-W(2):      | 0.250   |
|            | TH   | 3.00  | 1,247  | 5,100    | 0.245   |              |         |
|            | LT   | 1.00  | 34     | 1,700    | 0.020 * | V/C:         | 0.471   |
| Northbound | RT   | 1.00  | 43     | 1,700    | 0.015   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 86     | 1,700    | 0.051 * | ITS:         | 0.000   |
|            | LT   | 1.00  | 104    | 1,700    | 0.061   |              |         |
| Eastbound  | RT   | 0.00  | 158    | 0        | 0.000   | ICU:         | 0.571   |
|            | TH   | 3.00  | 1,466  | 5,100    | 0.318 * |              |         |
|            | LT   | 1.00  | 8      | 1,700    | 0.005   | LOS:         | A       |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 4      | 0        | 0.000   | N-S(1):      | 0.135   |
|            | TH   | 2.00  | 115    | 3,400    | 0.035 * | N-S(2):      | 0.144 * |
|            | LT   | 1.00  | 113    | 1,700    | 0.066   | E-W(1):      | 0.383 * |
| Westbound  | RT   | 1.00  | 111    | 1,700    | 0.032   | E-W(2):      | 0.278   |
|            | TH   | 3.00  | 1,391  | 5,100    | 0.273   |              |         |
|            | LT   | 1.00  | 42     | 1,700    | 0.025 * | V/C:         | 0.527   |
| Northbound | RT   | 1.00  | 43     | 1,700    | 0.013   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 118    | 1,700    | 0.069   | ITS:         | 0.000   |
|            | LT   | 1.00  | 186    | 1,700    | 0.109 * |              |         |
| Eastbound  | RT   | 0.00  | 186    | 0        | 0.000   | ICU:         | 0.627   |
|            | TH   | 3.00  | 1,638  | 5,100    | 0.358 * |              |         |
|            | LT   | 1.00  | 9      | 1,700    | 0.005   | LOS:         | B       |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 3 - Imperial Highway & Bastanchury Rd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    | WBR      |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |                 |
|------------|------|-------|--------|----------|---------|------------------|-----------------|
| Southbound | RT   | 1.00  | 2      | 1,700    | 0.000   | N-S(1): 0.304    | N-S(2): 0.356 * |
|            | TH   | 3.00  | 1,254  | 5,100    | 0.246 * |                  |                 |
|            | LT   | 2.00  | 280    | 2,720    | 0.103   |                  | E-W(1): 0.223 * |
| Westbound  | RT   | 1.00  | 519    | 1,700    | 0.202   | E-W(2): 0.215    | V/C: 0.579      |
|            | TH   | 2.00  | 521    | 3,400    | 0.153   |                  |                 |
|            | LT   | 1.00  | 3      | 1,700    | 0.002 * |                  |                 |
| Northbound | RT   | 1.00  | 4      | 1,700    | 0.001   | Lost Time: 0.100 | ITS: 0.000      |
|            | TH   | 3.00  | 1,024  | 5,100    | 0.201   |                  |                 |
|            | LT   | 2.00  | 300    | 2,720    | 0.110 * |                  |                 |
| Eastbound  | RT   | 0.00  | 375    | 1,700    | 0.221 * | ICU: 0.679       | LOS: B          |
|            | TH   | 2.00  | 307    | 1,700    | 0.181   |                  |                 |
|            | LT   | 1.00  | 22     | 1,700    | 0.013   |                  |                 |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |                 |
|------------|------|-------|--------|----------|---------|------------------|-----------------|
| Southbound | RT   | 1.00  | 2      | 1,700    | 0.000   | N-S(1): 0.406 *  | N-S(2): 0.392   |
|            | TH   | 3.00  | 1,486  | 5,100    | 0.291   |                  |                 |
|            | LT   | 2.00  | 404    | 2,720    | 0.149 * |                  | E-W(1): 0.231 * |
| Westbound  | RT   | 1.00  | 401    | 1,700    | 0.087   | E-W(2): 0.095    | V/C: 0.637      |
|            | TH   | 2.00  | 269    | 3,400    | 0.079   |                  |                 |
|            | LT   | 1.00  | 6      | 1,700    | 0.004 * |                  |                 |
| Northbound | RT   | 1.00  | 2      | 1,700    | 0.000   | Lost Time: 0.100 | ITS: 0.000      |
|            | TH   | 3.00  | 1,310  | 5,100    | 0.257 * |                  |                 |
|            | LT   | 2.00  | 274    | 2,720    | 0.101   |                  |                 |
| Eastbound  | RT   | 0.00  | 336    | 0        | 0.000   | ICU: 0.737       | LOS: C          |
|            | TH   | 2.00  | 437    | 3,400    | 0.227 * |                  |                 |
|            | LT   | 1.00  | 13     | 1,700    | 0.008   |                  |                 |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 5 - Prospect Ave & Bastanchury Rd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.63  | 95     | 1,070    | 0.061   | N-S(1):      | 0.053   |
|            | TH   | 0.37  | 56     | 630      | 0.089 * | N-S(2):      | 0.120 * |
|            | LT   | 1.00  | 1      | 1,700    | 0.001   | E-W(1):      | 0.230   |
| Westbound  | RT   | 1.00  | 7      | 1,700    | 0.004   | E-W(2):      | 0.295 * |
|            | TH   | 2.00  | 816    | 3,400    | 0.240 * | V/C:         | 0.415   |
|            | LT   | 1.00  | 13     | 1,700    | 0.008   | Lost Time:   | 0.100   |
| Northbound | RT   | 0.31  | 27     | 522      | 0.048   | ITS:         | 0.000   |
|            | TH   | 0.69  | 61     | 1,178    | 0.052   | ICU:         | 0.515   |
|            | LT   | 1.00  | 52     | 1,700    | 0.031 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 41     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 713    | 3,400    | 0.222   |              |         |
|            | LT   | 1.00  | 93     | 1,700    | 0.055 * |              |         |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.56  | 102    | 953      | 0.081   | N-S(1):      | 0.061   |
|            | TH   | 0.44  | 80     | 747      | 0.107 * | N-S(2):      | 0.129 * |
|            | LT   | 1.00  | 6      | 1,700    | 0.004   | E-W(1):      | 0.273 * |
| Westbound  | RT   | 1.00  | 14     | 1,700    | 0.006   | E-W(2):      | 0.216   |
|            | TH   | 2.00  | 555    | 3,400    | 0.163   | V/C:         | 0.402   |
|            | LT   | 1.00  | 23     | 1,700    | 0.014 * | Lost Time:   | 0.100   |
| Northbound | RT   | 0.31  | 30     | 526      | 0.050   | ITS:         | 0.000   |
|            | TH   | 0.69  | 67     | 1,174    | 0.057   | ICU:         | 0.502   |
|            | LT   | 1.00  | 38     | 1,700    | 0.022 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 56     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 823    | 3,400    | 0.259 * |              |         |
|            | LT   | 1.00  | 90     | 1,700    | 0.053   |              |         |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 6 - Rose Dr & Bastanchury Rd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 0.00  | 101    | 0        | 0.000   | N-S(1): 0.185<br>N-S(2): 0.281 *E-W(1): 0.267<br>E-W(2): 0.286 *V/C: 0.567 |  |
|            | TH   | 2.00  | 649    | 3,400    | 0.221 * |  |  |
|            | LT   | 1.00  | 144    | 1,700    | 0.085   |  |  |
| Westbound  | RT   | 0.00  | 78     | 0        | 0.000   | V/C: 0.567   |  |
|            | TH   | 2.00  | 759    | 3,400    | 0.246 * |  |  |
|            | LT   | 1.00  | 105    | 1,700    | 0.062   |  |  |
| Northbound | RT   | 1.00  | 112    | 1,700    | 0.035   | Lost Time: 0.100<br>ITS: 0.000   |  |
|            | TH   | 2.00  | 340    | 3,400    | 0.100   |  |  |
|            | LT   | 1.00  | 102    | 1,700    | 0.060 * |  |  |
| Eastbound  | RT   | 0.00  | 90     | 0        | 0.000   | ICU: 0.667   |  |
|            | TH   | 2.00  | 608    | 3,400    | 0.205   |  |  |
|            | LT   | 1.00  | 68     | 1,700    | 0.040 * |  |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 0.00  | 80     | 0        | 0.000   | N-S(1): 0.223<br>N-S(2): 0.252 *E-W(1): 0.301 *E-W(2): 0.226 |  |
|            | TH   | 2.00  | 484    | 3,400    | 0.166 * |  |  |
|            | LT   | 1.00  | 84     | 1,700    | 0.049   |  |  |
| Westbound  | RT   | 0.00  | 60     | 0        | 0.000   | V/C: 0.553   |  |
|            | TH   | 2.00  | 532    | 3,400    | 0.174   |  |  |
|            | LT   | 1.00  | 122    | 1,700    | 0.072 * |  |  |
| Northbound | RT   | 1.00  | 160    | 1,700    | 0.058   | Lost Time: 0.100<br>ITS: 0.000                               |  |
|            | TH   | 2.00  | 593    | 3,400    | 0.174   |  |  |
|            | LT   | 1.00  | 146    | 1,700    | 0.086 * |  |  |
| Eastbound  | RT   | 0.00  | 88     | 0        | 0.000   | ICU: 0.653   |  |
|            | TH   | 2.00  | 689    | 3,400    | 0.229 * |  |  |
|            | LT   | 1.00  | 88     | 1,700    | 0.052   |  |  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 7 - Rose Dr & Yorba Linda Blvd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 1.00  | 95     | 1,700    | 0.025   | N-S(1): 0.200<br>N-S(2): 0.261 *E-W(1): 0.294 *E-W(2): 0.274 |  |
|            | TH   | 2.00  | 670    | 3,400    | 0.197 * |  |  |
|            | LT   | 1.00  | 146    | 1,700    | 0.086   |  |  |
| Westbound  | RT   | 0.00  | 125    | 0        | 0.000   | V/C: 0.555<br>Lost Time: 0.100<br>ITS: 0.000                 |  |
|            | TH   | 2.00  | 600    | 3,400    | 0.213   |  |  |
|            | LT   | 1.00  | 228    | 1,700    | 0.134 * |  |  |
| Northbound | RT   | 1.00  | 141    | 1,700    | 0.016   | ICU: 0.655   |  |
|            | TH   | 2.00  | 389    | 3,400    | 0.114   |  |  |
|            | LT   | 1.00  | 108    | 1,700    | 0.064 * |  |  |
| Eastbound  | RT   | 1.00  | 41     | 1,700    | 0.000   | LOS: B   |  |
|            | TH   | 2.00  | 543    | 3,400    | 0.160 * |  |  |
|            | LT   | 1.00  | 104    | 1,700    | 0.061   |  |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 1.00  | 89     | 1,700    | 0.015   | N-S(1): 0.266 *<br>N-S(2): 0.235<br>E-W(1): 0.341 *E-W(2): 0.321 |  |
|            | TH   | 2.00  | 522    | 3,400    | 0.154   |  |  |
|            | LT   | 1.00  | 144    | 1,700    | 0.085 * |  |  |
| Westbound  | RT   | 0.00  | 172    | 0        | 0.000   | V/C: 0.607<br>Lost Time: 0.100<br>ITS: 0.000                     |  |
|            | TH   | 2.00  | 663    | 3,400    | 0.246   |  |  |
|            | LT   | 1.00  | 216    | 1,700    | 0.127 * |  |  |
| Northbound | RT   | 1.00  | 218    | 1,700    | 0.065   | ICU: 0.707   |  |
|            | TH   | 2.00  | 615    | 3,400    | 0.181 * |  |  |
|            | LT   | 1.00  | 138    | 1,700    | 0.081   |  |  |
| Eastbound  | RT   | 1.00  | 37     | 1,700    | 0.000   | LOS: C   |  |
|            | TH   | 2.00  | 726    | 3,400    | 0.214 * |  |  |
|            | LT   | 1.00  | 127    | 1,700    | 0.075   |  |  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 8 - Prospect Ave & Yorba Linda Blvd  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 81     | 1,700    | 0.035   | N-S(1): 0.040 * | N-S(2): 0.037    |
|            | TH   | 0.02  | 1      | 30       | 0.033   |                 |                  |
|            | LT   | 0.98  | 55     | 1,670    | 0.033 * |                 |                  |
| Westbound  | RT   | 1.00  | 36     | 1,700    | 0.005   | E-W(1): 0.249   | E-W(2): 0.291 *  |
|            | TH   | 2.00  | 903    | 3,400    | 0.266 * |                 |                  |
|            | LT   | 1.00  | 10     | 1,700    | 0.006   |                 |                  |
| Northbound | RT   | 0.00  | 8      | 0        | 0.000   | V/C: 0.331      | Lost Time: 0.100 |
|            | TH   | 1.00  | 1      | 1,700    | 0.007 * |                 |                  |
|            | LT   | 0.00  | 3      | 1,700    | 0.002   |                 |                  |
| Eastbound  | RT   | 0.00  | 10     | 0        | 0.000   | ICU: 0.431      | ITS: 0.000       |
|            | TH   | 2.00  | 816    | 3,400    | 0.243   |                 |                  |
|            | LT   | 1.00  | 42     | 1,700    | 0.025 * |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 57     | 1,700    | 0.017   | N-S(1): 0.048 * | N-S(2): 0.022    |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                 |                  |
|            | LT   | 1.00  | 62     | 1,700    | 0.036 * |                 |                  |
| Westbound  | RT   | 1.00  | 65     | 1,700    | 0.020   | E-W(1): 0.318   | E-W(2): 0.321 *  |
|            | TH   | 2.00  | 983    | 3,400    | 0.289 * |                 |                  |
|            | LT   | 1.00  | 5      | 1,700    | 0.003   |                 |                  |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | V/C: 0.369      | Lost Time: 0.100 |
|            | TH   | 1.00  | 2      | 1,700    | 0.012 * |                 |                  |
|            | LT   | 0.00  | 8      | 1,700    | 0.005   |                 |                  |
| Eastbound  | RT   | 0.00  | 4      | 0        | 0.000   | ICU: 0.469      | ITS: 0.000       |
|            | TH   | 2.00  | 1,067  | 3,400    | 0.315   |                 |                  |
|            | LT   | 1.00  | 55     | 1,700    | 0.032 * |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 9 - Rose Dr & Imperial Highway  
**Description:** Existing+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          | SBR,                     |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 0.00  | 19     | 0        | 0.000   | N-S(1): 0.313 * | N-S(2): 0.178    |
|            | TH   | 2.00  | 405    | 3,400    | 0.125   |                 |                  |
|            | LT   | 2.00  | 716    | 2,720    | 0.263 * |                 |                  |
| Westbound  | RT   | 1.00  | 413    | 1,700    | 0.111   | E-W(1): 0.288 * | E-W(2): 0.199    |
|            | TH   | 3.00  | 932    | 5,100    | 0.183   |                 |                  |
|            | LT   | 2.00  | 186    | 2,720    | 0.068 * |                 |                  |
| Northbound | RT   | 1.00  | 143    | 1,700    | 0.050 * | V/C: 0.601      | Lost Time: 0.100 |
|            | TH   | 2.00  | 150    | 3,400    | 0.044   |                 |                  |
|            | LT   | 2.00  | 143    | 2,720    | 0.053   |                 |                  |
| Eastbound  | RT   | 0.00  | 188    | 0        | 0.000   | ICU: 0.701      | ITS: 0.000       |
|            | TH   | 3.00  | 935    | 5,100    | 0.220 * |                 |                  |
|            | LT   | 1.00  | 27     | 1,700    | 0.016   |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 0.00  | 27     | 0        | 0.000   | N-S(1): 0.408 * | N-S(2): 0.196    |
|            | TH   | 2.00  | 347    | 3,400    | 0.110   |                 |                  |
|            | LT   | 2.00  | 803    | 2,720    | 0.295 * |                 |                  |
| Westbound  | RT   | 1.00  | 714    | 1,700    | 0.272   | E-W(1): 0.310 * | E-W(2): 0.297    |
|            | TH   | 3.00  | 922    | 5,100    | 0.181   |                 |                  |
|            | LT   | 2.00  | 166    | 2,720    | 0.061 * |                 |                  |
| Northbound | RT   | 1.00  | 91     | 1,700    | 0.023   | V/C: 0.718      | Lost Time: 0.100 |
|            | TH   | 2.00  | 384    | 3,400    | 0.113 * |                 |                  |
|            | LT   | 2.00  | 234    | 2,720    | 0.086   |                 |                  |
| Eastbound  | RT   | 0.00  | 173    | 0        | 0.000   | ICU: 0.818      | ITS: 0.000       |
|            | TH   | 3.00  | 1,096  | 5,100    | 0.249 * |                 |                  |
|            | LT   | 1.00  | 43     | 1,700    | 0.025   |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 1 - Valley View Ave & Yorba Linda Blvd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | Y  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 127    | 1,700    | 0.033   | N-S(1): 0.156 *N-S(2): 0.000<br>E-W(1): 0.172<br>E-W(2): 0.270 *V/C: 0.426 |
|            | TH   | 0.30  | 38     | 503      | 0.076   |  |
|            | LT   | 1.70  | 219    | 2,318    | 0.094 * |  |
| Westbound  | RT   | 0.00  | 175    | 0        | 0.000   | Lost Time: 0.100<br>ITS: 0.000   |
|            | TH   | 3.00  | 772    | 5,100    | 0.186 * |  |
|            | LT   | 1.00  | 45     | 1,700    | 0.026   |  |
| Northbound | RT   | 0.00  | 22     | 0        | 0.000   | ICU: 0.526   |
|            | TH   | 1.00  | 32     | 1,700    | 0.062 * |  |
|            | LT   | 0.00  | 51     | 1,700    | 0.030   |  |
| Eastbound  | RT   | 0.00  | 63     | 0        | 0.000   | LOS: A   |
|            | TH   | 3.00  | 682    | 5,100    | 0.146   |  |
|            | LT   | 1.00  | 143    | 1,700    | 0.084 * |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 148    | 1,700    | 0.031   | N-S(1): 0.202 *<br>N-S(2): 0.000<br>E-W(1): 0.214<br>E-W(2): 0.312 *V/C: 0.514 |
|            | TH   | 0.34  | 45     | 575      | 0.078   |  |
|            | LT   | 1.66  | 221    | 2,260    | 0.098 * |  |
| Westbound  | RT   | 0.00  | 249    | 0        | 0.000   | Lost Time: 0.100<br>ITS: 0.000   |
|            | TH   | 3.00  | 772    | 5,100    | 0.200 * |  |
|            | LT   | 1.00  | 56     | 1,700    | 0.033   |  |
| Northbound | RT   | 0.00  | 45     | 0        | 0.000   | ICU: 0.614   |
|            | TH   | 1.00  | 45     | 1,700    | 0.104 * |  |
|            | LT   | 0.00  | 86     | 1,700    | 0.051   |  |
| Eastbound  | RT   | 0.00  | 84     | 0        | 0.000   | LOS: B   |
|            | TH   | 3.00  | 838    | 5,100    | 0.181   |  |
|            | LT   | 1.00  | 190    | 1,700    | 0.112 * |  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 2 - Valley View Ave & Imperial Highway  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 3      | 0        | 0.000   | N-S(1):      | 0.136 * |
|            | TH   | 2.00  | 142    | 3,400    | 0.043   | N-S(2):      | 0.105   |
|            | LT   | 1.00  | 142    | 1,700    | 0.084 * | E-W(1):      | 0.344 * |
| Westbound  | RT   | 1.00  | 94     | 1,700    | 0.014   | E-W(2):      | 0.253   |
|            | TH   | 3.00  | 1,266  | 5,100    | 0.248   |              |         |
|            | LT   | 1.00  | 35     | 1,700    | 0.021 * | V/C:         | 0.480   |
| Northbound | RT   | 1.00  | 44     | 1,700    | 0.016   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 88     | 1,700    | 0.052 * | ITS:         | 0.000   |
|            | LT   | 1.00  | 106    | 1,700    | 0.062   |              |         |
| Eastbound  | RT   | 0.00  | 161    | 0        | 0.000   | ICU:         | 0.580   |
|            | TH   | 3.00  | 1,488  | 5,100    | 0.323 * |              |         |
|            | LT   | 1.00  | 9      | 1,700    | 0.005   | LOS:         | A       |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 5      | 0        | 0.000   | N-S(1):      | 0.139   |
|            | TH   | 2.00  | 117    | 3,400    | 0.036 * | N-S(2):      | 0.147 * |
|            | LT   | 1.00  | 115    | 1,700    | 0.068   | E-W(1):      | 0.388 * |
| Westbound  | RT   | 1.00  | 113    | 1,700    | 0.033   | E-W(2):      | 0.283   |
|            | TH   | 3.00  | 1,412  | 5,100    | 0.277   |              |         |
|            | LT   | 1.00  | 43     | 1,700    | 0.025 * | V/C:         | 0.535   |
| Northbound | RT   | 1.00  | 44     | 1,700    | 0.013   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 120    | 1,700    | 0.071   | ITS:         | 0.000   |
|            | LT   | 1.00  | 189    | 1,700    | 0.111 * |              |         |
| Eastbound  | RT   | 0.00  | 189    | 0        | 0.000   | ICU:         | 0.635   |
|            | TH   | 3.00  | 1,663  | 5,100    | 0.363 * |              |         |
|            | LT   | 1.00  | 10     | 1,700    | 0.006   | LOS:         | B       |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 3 - Imperial Highway & Bastanchury Rd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    | WBR      |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 1.00  | 3      | 1,700    | 0.000   | N-S(1): 0.309    |
|            | TH   | 3.00  | 1,273  | 5,100    | 0.250 * | N-S(2): 0.362 *  |
|            | LT   | 2.00  | 285    | 2,720    | 0.105   | E-W(1): 0.226 *  |
| Westbound  | RT   | 1.00  | 527    | 1,700    | 0.205   | E-W(2): 0.219    |
|            | TH   | 2.00  | 529    | 3,400    | 0.156   |                  |
|            | LT   | 1.00  | 4      | 1,700    | 0.002 * | V/C: 0.588       |
| Northbound | RT   | 1.00  | 5      | 1,700    | 0.002   | Lost Time: 0.100 |
|            | TH   | 3.00  | 1,040  | 5,100    | 0.204   | ITS: 0.000       |
|            | LT   | 2.00  | 305    | 2,720    | 0.112 * |                  |
| Eastbound  | RT   | 0.00  | 381    | 1,700    | 0.224 * | ICU: 0.688       |
|            | TH   | 2.00  | 312    | 1,700    | 0.184   |                  |
|            | LT   | 1.00  | 23     | 1,700    | 0.014   | LOS: B           |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 1.00  | 3      | 1,700    | 0.000   | N-S(1): 0.412 *  |
|            | TH   | 3.00  | 1,509  | 5,100    | 0.296   | N-S(2): 0.399    |
|            | LT   | 2.00  | 411    | 2,720    | 0.151 * | E-W(1): 0.235 *  |
| Westbound  | RT   | 1.00  | 408    | 1,700    | 0.089   | E-W(2): 0.097    |
|            | TH   | 2.00  | 274    | 3,400    | 0.081   |                  |
|            | LT   | 1.00  | 7      | 1,700    | 0.004 * | V/C: 0.647       |
| Northbound | RT   | 1.00  | 3      | 1,700    | 0.000   | Lost Time: 0.100 |
|            | TH   | 3.00  | 1,330  | 5,100    | 0.261 * | ITS: 0.000       |
|            | LT   | 2.00  | 279    | 2,720    | 0.103   |                  |
| Eastbound  | RT   | 0.00  | 341    | 0        | 0.000   | ICU: 0.747       |
|            | TH   | 2.00  | 444    | 3,400    | 0.231 * |                  |
|            | LT   | 1.00  | 14     | 1,700    | 0.008   | LOS: C           |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 5 - Prospect Ave & Bastanchury Rd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.63  | 97     | 1,071    | 0.063   | N-S(1):      | 0.054   |
|            | TH   | 0.37  | 57     | 629      | 0.091 * | N-S(2):      | 0.122 * |
|            | LT   | 1.00  | 2      | 1,700    | 0.001   | E-W(1):      | 0.233   |
| Westbound  | RT   | 1.00  | 8      | 1,700    | 0.004   | E-W(2):      | 0.300 * |
|            | TH   | 2.00  | 829    | 3,400    | 0.244 * | V/C:         | 0.422   |
|            | LT   | 1.00  | 14     | 1,700    | 0.008   | Lost Time:   | 0.100   |
| Northbound | RT   | 0.31  | 28     | 529      | 0.049   | ITS:         | 0.000   |
|            | TH   | 0.69  | 62     | 1,171    | 0.053   | ICU:         | 0.522   |
|            | LT   | 1.00  | 53     | 1,700    | 0.031 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 42     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 724    | 3,400    | 0.225   |              |         |
|            | LT   | 1.00  | 95     | 1,700    | 0.056 * |              |         |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.56  | 104    | 951      | 0.082   | N-S(1):      | 0.063   |
|            | TH   | 0.44  | 82     | 749      | 0.109 * | N-S(2):      | 0.132 * |
|            | LT   | 1.00  | 7      | 1,700    | 0.004   | E-W(1):      | 0.276 * |
| Westbound  | RT   | 1.00  | 15     | 1,700    | 0.007   | E-W(2):      | 0.220   |
|            | TH   | 2.00  | 563    | 3,400    | 0.166   | V/C:         | 0.408   |
|            | LT   | 1.00  | 24     | 1,700    | 0.014 * | Lost Time:   | 0.100   |
| Northbound | RT   | 0.31  | 31     | 527      | 0.052   | ITS:         | 0.000   |
|            | TH   | 0.69  | 69     | 1,173    | 0.059   | ICU:         | 0.508   |
|            | LT   | 1.00  | 39     | 1,700    | 0.023 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 57     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 835    | 3,400    | 0.262 * |              |         |
|            | LT   | 1.00  | 92     | 1,700    | 0.054   |              |         |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 6 - Rose Dr & Bastanchury Rd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 0.00  | 103    | 0        | 0.000   | N-S(1): 0.188<br>N-S(2): 0.285 *E-W(1): 0.272<br>E-W(2): 0.291 *V/C: 0.576 |  |
|            | TH   | 2.00  | 659    | 3,400    | 0.224 * |  |  |
|            | LT   | 1.00  | 146    | 1,700    | 0.086   |  |  |
| Westbound  | RT   | 0.00  | 80     | 0        | 0.000   | V/C: 0.576   |  |
|            | TH   | 2.00  | 771    | 3,400    | 0.250 * |  |  |
|            | LT   | 1.00  | 107    | 1,700    | 0.063   |  |  |
| Northbound | RT   | 1.00  | 114    | 1,700    | 0.036   | Lost Time: 0.100<br>ITS: 0.000   |  |
|            | TH   | 2.00  | 346    | 3,400    | 0.102   |  |  |
|            | LT   | 1.00  | 104    | 1,700    | 0.061 * |  |  |
| Eastbound  | RT   | 0.00  | 92     | 0        | 0.000   | ICU: 0.676   |  |
|            | TH   | 2.00  | 617    | 3,400    | 0.209   |  |  |
|            | LT   | 1.00  | 70     | 1,700    | 0.041 * |  |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |  |
|------------|------|-------|--------|----------|---------|--|--|
| Southbound | RT   | 0.00  | 82     | 0        | 0.000   | N-S(1): 0.228<br>N-S(2): 0.257 *E-W(1): 0.305 *E-W(2): 0.230 |  |
|            | TH   | 2.00  | 492    | 3,400    | 0.169 * |  |  |
|            | LT   | 1.00  | 86     | 1,700    | 0.051   |  |  |
| Westbound  | RT   | 0.00  | 61     | 0        | 0.000   | V/C: 0.562   |  |
|            | TH   | 2.00  | 540    | 3,400    | 0.177   |  |  |
|            | LT   | 1.00  | 124    | 1,700    | 0.073 * |  |  |
| Northbound | RT   | 1.00  | 163    | 1,700    | 0.059   | Lost Time: 0.100<br>ITS: 0.000                               |  |
|            | TH   | 2.00  | 602    | 3,400    | 0.177   |  |  |
|            | LT   | 1.00  | 149    | 1,700    | 0.088 * |  |  |
| Eastbound  | RT   | 0.00  | 90     | 0        | 0.000   | ICU: 0.662   |  |
|            | TH   | 2.00  | 700    | 3,400    | 0.232 * |  |  |
|            | LT   | 1.00  | 90     | 1,700    | 0.053   |  |  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 7 - Rose Dr & Yorba Linda Blvd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 97     | 1,700    | 0.026   | N-S(1): 0.204   | N-S(2): 0.265 *  |
|            | TH   | 2.00  | 681    | 3,400    | 0.200 * |                 |                  |
|            | LT   | 1.00  | 149    | 1,700    | 0.088   |                 |                  |
| Westbound  | RT   | 0.00  | 127    | 0        | 0.000   | E-W(1): 0.298 * | E-W(2): 0.278    |
|            | TH   | 2.00  | 609    | 3,400    | 0.216   |                 |                  |
|            | LT   | 1.00  | 232    | 1,700    | 0.136 * |                 |                  |
| Northbound | RT   | 1.00  | 144    | 1,700    | 0.016   | V/C: 0.563      | Lost Time: 0.100 |
|            | TH   | 2.00  | 395    | 3,400    | 0.116   |                 |                  |
|            | LT   | 1.00  | 110    | 1,700    | 0.065 * |                 |                  |
| Eastbound  | RT   | 1.00  | 42     | 1,700    | 0.000   | ICU: 0.663      | ITS: 0.000       |
|            | TH   | 2.00  | 552    | 3,400    | 0.162 * |                 |                  |
|            | LT   | 1.00  | 106    | 1,700    | 0.062   |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 91     | 1,700    | 0.016   | N-S(1): 0.270 * | N-S(2): 0.239    |
|            | TH   | 2.00  | 530    | 3,400    | 0.156   |                 |                  |
|            | LT   | 1.00  | 147    | 1,700    | 0.086 * |                 |                  |
| Westbound  | RT   | 0.00  | 175    | 0        | 0.000   | E-W(1): 0.346 * | E-W(2): 0.325    |
|            | TH   | 2.00  | 673    | 3,400    | 0.249   |                 |                  |
|            | LT   | 1.00  | 220    | 1,700    | 0.129 * |                 |                  |
| Northbound | RT   | 1.00  | 222    | 1,700    | 0.066   | V/C: 0.616      | Lost Time: 0.100 |
|            | TH   | 2.00  | 625    | 3,400    | 0.184 * |                 |                  |
|            | LT   | 1.00  | 141    | 1,700    | 0.083   |                 |                  |
| Eastbound  | RT   | 1.00  | 38     | 1,700    | 0.000   | ICU: 0.716      | ITS: 0.000       |
|            | TH   | 2.00  | 737    | 3,400    | 0.217 * |                 |                  |
|            | LT   | 1.00  | 129    | 1,700    | 0.076   |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 8 - Prospect Ave & Yorba Linda Blvd  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS                 |
|------------|------|-------|--------|----------|---------|------------------------------|
| Southbound | RT   | 1.00  | 83     | 1,700    | 0.036   | N-S(1): 0.043 *N-S(2): 0.038 |
|            | TH   | 0.03  | 2      | 59       | 0.034   |                              |
|            | LT   | 0.97  | 56     | 1,641    | 0.034 * |                              |
| Westbound  | RT   | 1.00  | 37     | 1,700    | 0.005   | E-W(1): 0.253                |
|            | TH   | 2.00  | 917    | 3,400    | 0.270 * |                              |
|            | LT   | 1.00  | 11     | 1,700    | 0.006   |                              |
| Northbound | RT   | 0.00  | 9      | 0        | 0.000   | V/C: 0.338                   |
|            | TH   | 1.00  | 2      | 1,700    | 0.009 * |                              |
|            | LT   | 0.00  | 4      | 1,700    | 0.002   |                              |
| Eastbound  | RT   | 0.00  | 11     | 0        | 0.000   | ICU: 0.438                   |
|            | TH   | 2.00  | 829    | 3,400    | 0.247   |                              |
|            | LT   | 1.00  | 43     | 1,700    | 0.025 * |                              |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS     |
|------------|------|-------|--------|----------|---------|------------------|
| Southbound | RT   | 1.00  | 58     | 1,700    | 0.018   | N-S(1): 0.051 *  |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                  |
|            | LT   | 1.00  | 63     | 1,700    | 0.037 * |                  |
| Westbound  | RT   | 1.00  | 66     | 1,700    | 0.020   | E-W(1): 0.324    |
|            | TH   | 2.00  | 998    | 3,400    | 0.294 * |                  |
|            | LT   | 1.00  | 6      | 1,700    | 0.004   |                  |
| Northbound | RT   | 0.00  | 11     | 0        | 0.000   | V/C: 0.378       |
|            | TH   | 1.00  | 3      | 1,700    | 0.014 * |                  |
|            | LT   | 0.00  | 9      | 1,700    | 0.005   |                  |
| Eastbound  | RT   | 0.00  | 5      | 0        | 0.000   | Lost Time: 0.100 |
|            | TH   | 2.00  | 1,084  | 3,400    | 0.320   |                  |
|            | LT   | 1.00  | 56     | 1,700    | 0.033 * |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 9 - Rose Dr & Imperial Highway  
**Description:** 2024+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          | SBR,                     |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 0.00  | 20     | 0        | 0.000   | N-S(1): 0.318 * | N-S(2): 0.181    |
|            | TH   | 2.00  | 412    | 3,400    | 0.127   |                 |                  |
|            | LT   | 2.00  | 727    | 2,720    | 0.267 * |                 |                  |
| Westbound  | RT   | 1.00  | 420    | 1,700    | 0.113   | E-W(1): 0.293 * | E-W(2): 0.201    |
|            | TH   | 3.00  | 946    | 5,100    | 0.185   |                 |                  |
|            | LT   | 2.00  | 189    | 2,720    | 0.069 * |                 |                  |
| Northbound | RT   | 1.00  | 146    | 1,700    | 0.051 * | V/C: 0.611      | Lost Time: 0.100 |
|            | TH   | 2.00  | 153    | 3,400    | 0.045   |                 |                  |
|            | LT   | 2.00  | 146    | 2,720    | 0.054   |                 |                  |
| Eastbound  | RT   | 0.00  | 191    | 0        | 0.000   | ICU: 0.711      | ITS: 0.000       |
|            | TH   | 3.00  | 950    | 5,100    | 0.224 * |                 |                  |
|            | LT   | 1.00  | 28     | 1,700    | 0.016   |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 0.00  | 28     | 0        | 0.000   | N-S(1): 0.415 * | N-S(2): 0.200    |
|            | TH   | 2.00  | 353    | 3,400    | 0.112   |                 |                  |
|            | LT   | 2.00  | 816    | 2,720    | 0.300 * |                 |                  |
| Westbound  | RT   | 1.00  | 725    | 1,700    | 0.276   | E-W(1): 0.315 * | E-W(2): 0.302    |
|            | TH   | 3.00  | 936    | 5,100    | 0.184   |                 |                  |
|            | LT   | 2.00  | 169    | 2,720    | 0.062 * |                 |                  |
| Northbound | RT   | 1.00  | 93     | 1,700    | 0.024   | V/C: 0.730      | Lost Time: 0.100 |
|            | TH   | 2.00  | 390    | 3,400    | 0.115 * |                 |                  |
|            | LT   | 2.00  | 238    | 2,720    | 0.088   |                 |                  |
| Eastbound  | RT   | 0.00  | 176    | 0        | 0.000   | ICU: 0.830      | ITS: 0.000       |
|            | TH   | 3.00  | 1,113  | 5,100    | 0.253 * |                 |                  |
|            | LT   | 1.00  | 44     | 1,700    | 0.026   |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 1 - Valley View Ave & Yorba Linda Blvd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | Y  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 150    | 1,700    | 0.040   | N-S(1): 0.185 *N-S(2): 0.000<br>E-W(1): 0.202<br>E-W(2): 0.312 *V/C: 0.497 |
|            | TH   | 0.30  | 45     | 508      | 0.089   |  |
|            | LT   | 1.70  | 256    | 2,313    | 0.111 * |  |
| Westbound  | RT   | 0.00  | 203    | 0        | 0.000   | V/C: 0.497<br>Lost Time: 0.100<br>ITS: 0.000                               |
|            | TH   | 3.00  | 895    | 5,100    | 0.215 * |  |
|            | LT   | 1.00  | 55     | 1,700    | 0.032   |  |
| Northbound | RT   | 0.00  | 25     | 0        | 0.000   | ICU: 0.597   |
|            | TH   | 1.00  | 40     | 1,700    | 0.074 * |  |
|            | LT   | 0.00  | 60     | 1,700    | 0.035   |  |
| Eastbound  | RT   | 0.00  | 75     | 0        | 0.000   | LOS: A   |
|            | TH   | 3.00  | 790    | 5,100    | 0.170   |  |
|            | LT   | 1.00  | 165    | 1,700    | 0.097 * |  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS   |
|------------|------|-------|--------|----------|---------|--|
| Southbound | RT   | 1.00  | 175    | 1,700    | 0.038   | N-S(1): 0.239 *<br>N-S(2): 0.000<br>E-W(1): 0.248<br>E-W(2): 0.361 *V/C: 0.600 |
|            | TH   | 0.35  | 55     | 599      | 0.092   |  |
|            | LT   | 1.65  | 257    | 2,241    | 0.115 * |  |
| Westbound  | RT   | 0.00  | 288    | 0        | 0.000   | Lost Time: 0.100<br>ITS: 0.000   |
|            | TH   | 3.00  | 895    | 5,100    | 0.232 * |  |
|            | LT   | 1.00  | 65     | 1,700    | 0.038   |  |
| Northbound | RT   | 0.00  | 55     | 0        | 0.000   | ICU: 0.700   |
|            | TH   | 1.00  | 55     | 1,700    | 0.124 * |  |
|            | LT   | 0.00  | 100    | 1,700    | 0.059   |  |
| Eastbound  | RT   | 0.00  | 100    | 0        | 0.000   | LOS: B   |
|            | TH   | 3.00  | 970    | 5,100    | 0.210   |  |
|            | LT   | 1.00  | 220    | 1,700    | 0.129 * |  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 2 - Valley View Ave & Imperial Highway  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 5      | 0        | 0.000   | N-S(1):      | 0.159 * |
|            | TH   | 2.00  | 165    | 3,400    | 0.050   | N-S(2):      | 0.122   |
|            | LT   | 1.00  | 165    | 1,700    | 0.097 * | E-W(1):      | 0.398 * |
| Westbound  | RT   | 1.00  | 110    | 1,700    | 0.016   | E-W(2):      | 0.293   |
|            | TH   | 3.00  | 1,464  | 5,100    | 0.287   |              |         |
|            | LT   | 1.00  | 40     | 1,700    | 0.024 * | V/C:         | 0.557   |
| Northbound | RT   | 1.00  | 55     | 1,700    | 0.021   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 105    | 1,700    | 0.062 * | ITS:         | 0.000   |
|            | LT   | 1.00  | 123    | 1,700    | 0.072   |              |         |
| Eastbound  | RT   | 0.00  | 186    | 0        | 0.000   | ICU:         | 0.657   |
|            | TH   | 3.00  | 1,721  | 5,100    | 0.374 * |              |         |
|            | LT   | 1.00  | 10     | 1,700    | 0.006   | LOS:         | B       |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 5      | 0        | 0.000   | N-S(1):      | 0.161   |
|            | TH   | 2.00  | 135    | 3,400    | 0.041 * | N-S(2):      | 0.169 * |
|            | LT   | 1.00  | 135    | 1,700    | 0.079   | E-W(1):      | 0.450 * |
| Westbound  | RT   | 1.00  | 135    | 1,700    | 0.040   | E-W(2):      | 0.329   |
|            | TH   | 3.00  | 1,634  | 5,100    | 0.320   |              |         |
|            | LT   | 1.00  | 50     | 1,700    | 0.029 * | V/C:         | 0.619   |
| Northbound | RT   | 1.00  | 55     | 1,700    | 0.018   | Lost Time:   | 0.100   |
|            | TH   | 1.00  | 140    | 1,700    | 0.082   | ITS:         | 0.000   |
|            | LT   | 1.00  | 218    | 1,700    | 0.128 * |              |         |
| Eastbound  | RT   | 0.00  | 222    | 0        | 0.000   | ICU:         | 0.719   |
|            | TH   | 3.00  | 1,924  | 5,100    | 0.421 * |              |         |
|            | LT   | 1.00  | 15     | 1,700    | 0.009   | LOS:         | C       |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 3 - Imperial Highway & Bastanchury Rd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    | WBR      |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |         |
|------------|------|-------|--------|----------|---------|-----------------|---------|
| Southbound | RT   | 1.00  | 5      | 1,700    | 0.000   | N-S(1): 0.357   | 0.418 * |
|            | TH   | 3.00  | 1,475  | 5,100    | 0.289 * |                 |         |
|            | LT   | 2.00  | 330    | 2,720    | 0.121   |                 |         |
| Westbound  | RT   | 1.00  | 610    | 1,700    | 0.238   | E-W(1): 0.263 * | 0.256   |
|            | TH   | 2.00  | 612    | 3,400    | 0.180   |                 |         |
|            | LT   | 1.00  | 5      | 1,700    | 0.003 * |                 |         |
| Northbound | RT   | 1.00  | 5      | 1,700    | 0.001   | V/C: 0.681      | 0.100   |
|            | TH   | 3.00  | 1,205  | 5,100    | 0.236   |                 |         |
|            | LT   | 2.00  | 352    | 2,720    | 0.129 * |                 |         |
| Eastbound  | RT   | 0.00  | 442    | 1,700    | 0.260 * | ICU: 0.781      | 0.000   |
|            | TH   | 2.00  | 360    | 1,700    | 0.212   |                 |         |
|            | LT   | 1.00  | 30     | 1,700    | 0.018   |                 |         |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |       |
|------------|------|-------|--------|----------|---------|-----------------|-------|
| Southbound | RT   | 1.00  | 5      | 1,700    | 0.000   | N-S(1): 0.477 * | 0.460 |
|            | TH   | 3.00  | 1,745  | 5,100    | 0.342   |                 |       |
|            | LT   | 2.00  | 475    | 2,720    | 0.175 * |                 |       |
| Westbound  | RT   | 1.00  | 475    | 1,700    | 0.105   | E-W(1): 0.274 * | 0.117 |
|            | TH   | 2.00  | 316    | 3,400    | 0.093   |                 |       |
|            | LT   | 1.00  | 10     | 1,700    | 0.006 * |                 |       |
| Northbound | RT   | 1.00  | 5      | 1,700    | 0.000   | V/C: 0.751      | 0.100 |
|            | TH   | 3.00  | 1,540  | 5,100    | 0.302 * |                 |       |
|            | LT   | 2.00  | 322    | 2,720    | 0.118   |                 |       |
| Eastbound  | RT   | 0.00  | 396    | 0        | 0.000   | ICU: 0.851      | 0.000 |
|            | TH   | 2.00  | 516    | 3,400    | 0.268 * |                 |       |
|            | LT   | 1.00  | 20     | 1,700    | 0.012   |                 |       |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 5 - Prospect Ave & Bastanchury Rd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.62  | 115    | 1,057    | 0.076   | N-S(1):      | 0.066   |
|            | TH   | 0.38  | 70     | 643      | 0.109 * | N-S(2):      | 0.147 * |
|            | LT   | 1.00  | 5      | 1,700    | 0.003   | E-W(1):      | 0.268   |
| Westbound  | RT   | 1.00  | 10     | 1,700    | 0.004   | E-W(2):      | 0.347 * |
|            | TH   | 2.00  | 958    | 3,400    | 0.282 * | V/C:         | 0.494   |
|            | LT   | 1.00  | 16     | 1,700    | 0.009   | Lost Time:   | 0.100   |
| Northbound | RT   | 0.30  | 32     | 508      | 0.058   | ITS:         | 0.000   |
|            | TH   | 0.70  | 75     | 1,192    | 0.063   | ICU:         | 0.594   |
|            | LT   | 1.00  | 65     | 1,700    | 0.038 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 50     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 832    | 3,400    | 0.259   |              |         |
|            | LT   | 1.00  | 110    | 1,700    | 0.065 * |              |         |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.56  | 120    | 949      | 0.094   | N-S(1):      | 0.075   |
|            | TH   | 0.44  | 95     | 751      | 0.126 * | N-S(2):      | 0.152 * |
|            | LT   | 1.00  | 10     | 1,700    | 0.006   | E-W(1):      | 0.320 * |
| Westbound  | RT   | 1.00  | 20     | 1,700    | 0.009   | E-W(2):      | 0.256   |
|            | TH   | 2.00  | 648    | 3,400    | 0.191   | V/C:         | 0.472   |
|            | LT   | 1.00  | 27     | 1,700    | 0.016 * | Lost Time:   | 0.100   |
| Northbound | RT   | 0.32  | 37     | 538      | 0.061   | ITS:         | 0.000   |
|            | TH   | 0.68  | 80     | 1,162    | 0.069   | ICU:         | 0.572   |
|            | LT   | 1.00  | 45     | 1,700    | 0.026 * | LOS:         | A       |
| Eastbound  | RT   | 0.00  | 70     | 0        | 0.000   |              |         |
|            | TH   | 2.00  | 964    | 3,400    | 0.304 * |              |         |
|            | LT   | 1.00  | 110    | 1,700    | 0.065   |              |         |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 6 - Rose Dr & Bastanchury Rd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS  |                  |
|------------|------|-------|--------|----------|---------|---------------|------------------|
| Southbound | RT   | 0.00  | 120    | 0        | 0.000   | N-S(1): 0.216 | N-S(2): 0.331 *  |
|            | TH   | 2.00  | 765    | 3,400    | 0.260 * |               |                  |
|            | LT   | 1.00  | 167    | 1,700    | 0.098   |               |                  |
| Westbound  | RT   | 0.00  | 94     | 0        | 0.000   | E-W(1): 0.316 | E-W(2): 0.337 *  |
|            | TH   | 2.00  | 893    | 3,400    | 0.290 * |               |                  |
|            | LT   | 1.00  | 126    | 1,700    | 0.074   |               |                  |
| Northbound | RT   | 1.00  | 132    | 1,700    | 0.041   | V/C: 0.668    | Lost Time: 0.100 |
|            | TH   | 2.00  | 400    | 3,400    | 0.118   |               |                  |
|            | LT   | 1.00  | 120    | 1,700    | 0.071 * |               |                  |
| Eastbound  | RT   | 0.00  | 110    | 0        | 0.000   | ICU: 0.768    | ITS: 0.000       |
|            | TH   | 2.00  | 713    | 3,400    | 0.242   |               |                  |
|            | LT   | 1.00  | 80     | 1,700    | 0.047 * |               |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 0.00  | 95     | 0        | 0.000   | N-S(1): 0.265   | N-S(2): 0.299 *  |
|            | TH   | 2.00  | 570    | 3,400    | 0.196 * |                 |                  |
|            | LT   | 1.00  | 101    | 1,700    | 0.059   |                 |                  |
| Westbound  | RT   | 0.00  | 71     | 0        | 0.000   | E-W(1): 0.353 * | E-W(2): 0.267    |
|            | TH   | 2.00  | 627    | 3,400    | 0.205   |                 |                  |
|            | LT   | 1.00  | 145    | 1,700    | 0.085 * |                 |                  |
| Northbound | RT   | 1.00  | 186    | 1,700    | 0.067   | V/C: 0.652      | Lost Time: 0.100 |
|            | TH   | 2.00  | 700    | 3,400    | 0.206   |                 |                  |
|            | LT   | 1.00  | 175    | 1,700    | 0.103 * |                 |                  |
| Eastbound  | RT   | 0.00  | 105    | 0        | 0.000   | ICU: 0.752      | ITS: 0.000       |
|            | TH   | 2.00  | 807    | 3,400    | 0.268 * |                 |                  |
|            | LT   | 1.00  | 105    | 1,700    | 0.062   |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 7 - Rose Dr & Yorba Linda Blvd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 1.00  | 113    | 1,700    | 0.031   | N-S(1):      | 0.237   |
|            | TH   | 2.00  | 788    | 3,400    | 0.232 * | N-S(2):      | 0.308 * |
|            | LT   | 1.00  | 175    | 1,700    | 0.103   | E-W(1):      | 0.347 * |
| Westbound  | RT   | 0.00  | 150    | 0        | 0.000   | E-W(2):      | 0.323   |
|            | TH   | 2.00  | 705    | 3,400    | 0.251   |              |         |
|            | LT   | 1.00  | 270    | 1,700    | 0.159 * | V/C:         | 0.655   |
| Northbound | RT   | 1.00  | 170    | 1,700    | 0.021   | Lost Time:   | 0.100   |
|            | TH   | 2.00  | 455    | 3,400    | 0.134   | ITS:         | 0.000   |
|            | LT   | 1.00  | 130    | 1,700    | 0.076 * |              |         |
| Eastbound  | RT   | 1.00  | 50     | 1,700    | 0.000   | ICU:         | 0.755   |
|            | TH   | 2.00  | 640    | 3,400    | 0.188 * |              |         |
|            | LT   | 1.00  | 122    | 1,700    | 0.072   | LOS:         | C       |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 1.00  | 107    | 1,700    | 0.018   | N-S(1):      | 0.313 * |
|            | TH   | 2.00  | 613    | 3,400    | 0.180   | N-S(2):      | 0.277   |
|            | LT   | 1.00  | 170    | 1,700    | 0.100 * | E-W(1):      | 0.401 * |
| Westbound  | RT   | 0.00  | 205    | 0        | 0.000   | E-W(2):      | 0.379   |
|            | TH   | 2.00  | 780    | 3,400    | 0.290   |              |         |
|            | LT   | 1.00  | 255    | 1,700    | 0.150 * | V/C:         | 0.714   |
| Northbound | RT   | 1.00  | 260    | 1,700    | 0.078   | Lost Time:   | 0.100   |
|            | TH   | 2.00  | 724    | 3,400    | 0.213 * | ITS:         | 0.000   |
|            | LT   | 1.00  | 165    | 1,700    | 0.097   |              |         |
| Eastbound  | RT   | 1.00  | 45     | 1,700    | 0.000   | ICU:         | 0.814   |
|            | TH   | 2.00  | 855    | 3,400    | 0.251 * |              |         |
|            | LT   | 1.00  | 152    | 1,700    | 0.089   | LOS:         | D       |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 8 - Prospect Ave & Yorba Linda Blvd  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          |                          |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 95     | 1,700    | 0.041   | N-S(1): 0.054 * | N-S(2): 0.045    |
|            | TH   | 0.07  | 5      | 120      | 0.042   |                 |                  |
|            | LT   | 0.93  | 66     | 1,580    | 0.042 * |                 |                  |
| Westbound  | RT   | 1.00  | 46     | 1,700    | 0.006   | E-W(1): 0.296   | E-W(2): 0.341 *  |
|            | TH   | 2.00  | 1,060  | 3,400    | 0.312 * |                 |                  |
|            | LT   | 1.00  | 15     | 1,700    | 0.009   |                 |                  |
| Northbound | RT   | 0.00  | 10     | 0        | 0.000   | V/C: 0.395      | Lost Time: 0.100 |
|            | TH   | 1.00  | 5      | 1,700    | 0.012 * |                 |                  |
|            | LT   | 0.00  | 5      | 1,700    | 0.003   |                 |                  |
| Eastbound  | RT   | 0.00  | 15     | 0        | 0.000   | ICU: 0.495      | ITS: 0.000       |
|            | TH   | 2.00  | 960    | 3,400    | 0.287   |                 |                  |
|            | LT   | 1.00  | 50     | 1,700    | 0.029 * |                 |                  |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS    |                  |
|------------|------|-------|--------|----------|---------|-----------------|------------------|
| Southbound | RT   | 1.00  | 70     | 1,700    | 0.022   | N-S(1): 0.063 * | N-S(2): 0.028    |
|            | TH   | 0.00  | 0      | 0        | 0.000   |                 |                  |
|            | LT   | 1.00  | 76     | 1,700    | 0.045 * |                 |                  |
| Westbound  | RT   | 1.00  | 81     | 1,700    | 0.025   | E-W(1): 0.377   | E-W(2): 0.378 *  |
|            | TH   | 2.00  | 1,155  | 3,400    | 0.340 * |                 |                  |
|            | LT   | 1.00  | 10     | 1,700    | 0.006   |                 |                  |
| Northbound | RT   | 0.00  | 15     | 0        | 0.000   | V/C: 0.441      | Lost Time: 0.100 |
|            | TH   | 1.00  | 5      | 1,700    | 0.018 * |                 |                  |
|            | LT   | 0.00  | 10     | 1,700    | 0.006   |                 |                  |
| Eastbound  | RT   | 0.00  | 5      | 0        | 0.000   | ICU: 0.541      | ITS: 0.000       |
|            | TH   | 2.00  | 1,255  | 3,400    | 0.371   |                 |                  |
|            | LT   | 1.00  | 65     | 1,700    | 0.038 * |                 |                  |

\* - Denotes critical movement

**Project Title:** LDS Yorba Linda  
**Intersection:** 9 - Rose Dr & Imperial Highway  
**Description:** 2045+P

|                    |          |                          |    |
|--------------------|----------|--------------------------|----|
| Thru Lane:         | 1700 vph | N-S Split Phase :        | N  |
| Left Lane:         | 1700 vph | E-W Split Phase :        | N  |
| Double Lt Penalty: | 20 %     | Lost Time (% of cycle) : | 10 |
| ITS:               | 0 %      | V/C Round Off (decs.) :  | 3  |
| OLA Movements :    |          |                          |    |
| FF Movements:      |          | SBR,                     |    |

**Date/Time:** AM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 25     | 0        | 0.000   | N-S(1):      | 0.369 * |
|            | TH   | 2.00  | 479    | 3,400    | 0.148   | N-S(2):      | 0.210   |
|            | LT   | 2.00  | 840    | 2,720    | 0.309 * | E-W(1):      | 0.340 * |
| Westbound  | RT   | 1.00  | 485    | 1,700    | 0.131   | E-W(2):      | 0.236   |
|            | TH   | 3.00  | 1,095  | 5,100    | 0.215   |              |         |
|            | LT   | 2.00  | 220    | 2,720    | 0.081 * | V/C:         | 0.709   |
| Northbound | RT   | 1.00  | 170    | 1,700    | 0.060 * | Lost Time:   | 0.100   |
|            | TH   | 2.00  | 176    | 3,400    | 0.052   | ITS:         | 0.000   |
|            | LT   | 2.00  | 168    | 2,720    | 0.062   |              |         |
| Eastbound  | RT   | 0.00  | 223    | 0        | 0.000   | ICU:         | 0.809   |
|            | TH   | 3.00  | 1,100  | 5,100    | 0.259 * |              |         |
|            | LT   | 1.00  | 35     | 1,700    | 0.021   | LOS:         | D       |

**Date/Time:** PM PEAK HOUR

| APPROACH   | MVMT | LANES | VOLUME | CAPACITY | V/C     | ICU ANALYSIS |         |
|------------|------|-------|--------|----------|---------|--------------|---------|
| Southbound | RT   | 0.00  | 35     | 0        | 0.000   | N-S(1):      | 0.480 * |
|            | TH   | 2.00  | 408    | 3,400    | 0.130   | N-S(2):      | 0.230   |
|            | LT   | 2.00  | 945    | 2,720    | 0.347 * | E-W(1):      | 0.365 * |
| Westbound  | RT   | 1.00  | 840    | 1,700    | 0.320   | E-W(2):      | 0.352   |
|            | TH   | 3.00  | 1,085  | 5,100    | 0.213   |              |         |
|            | LT   | 2.00  | 195    | 2,720    | 0.072 * | V/C:         | 0.845   |
| Northbound | RT   | 1.00  | 110    | 1,700    | 0.029   | Lost Time:   | 0.100   |
|            | TH   | 2.00  | 453    | 3,400    | 0.133 * | ITS:         | 0.000   |
|            | LT   | 2.00  | 273    | 2,720    | 0.100   |              |         |
| Eastbound  | RT   | 0.00  | 203    | 0        | 0.000   | ICU:         | 0.945   |
|            | TH   | 3.00  | 1,290  | 5,100    | 0.293 * |              |         |
|            | LT   | 1.00  | 55     | 1,700    | 0.032   | LOS:         | E       |

\* - Denotes critical movement

## HCM 6th TWSC

## 4: Osmond Street/Baptist Church Access &amp; Bastanchury Road

Existing+P PM (1 Access)

## Intersection

Int Delay, s/veh 0.1

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗    | ↖ ↗  | ↑ ↗  | ↗    | ↙ ↗  | ↖ ↗  | ↗    | ↙ ↗  | ↖ ↗  | ↙ ↗  |
| Traffic Vol, veh/h       | 0    | 809  | 2    | 2    | 556  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Future Vol, veh/h        | 0    | 809  | 2    | 2    | 556  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 852  | 2    | 2    | 585  | 5    | 3    | 0    | 0    | 1    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   | Minor1 |   | Minor2 |      |      |      |      |      |      |
|----------------------|--------|--------|---|--------|---|--------|------|------|------|------|------|------|
| Conflicting Flow All | 590    | 0      | 0 | 854    | 0 | 0      | 1149 | 1446 | 426  | 1015 | 1443 | 293  |
| Stage 1              | -      | -      | - | -      | - | -      | 852  | 852  | -    | 589  | 589  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 297  | 594  | -    | 426  | 854  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14   | - | -      | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -      | - | -      | 6.54 | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22   | - | -      | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 982    | -      | - | 781    | - | -      | 153  | 131  | 577  | 192  | 131  | 703  |
| Stage 1              | -      | -      | - | -      | - | -      | 321  | 374  | -    | 461  | 494  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 687  | 491  | -    | 577  | 373  | -    |
| Platoon blocked, %   | -      | -      | - | -      | - | -      | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 982    | -      | - | 781    | - | -      | 153  | 131  | 577  | 192  | 131  | 703  |
| Mov Cap-2 Maneuver   | -      | -      | - | -      | - | -      | 153  | 131  | -    | 192  | 131  | -    |
| Stage 1              | -      | -      | - | -      | - | -      | 321  | 374  | -    | 461  | 493  | -    |
| Stage 2              | -      | -      | - | -      | - | -      | 685  | 490  | -    | 577  | 373  | -    |

| Approach              | EB    | WB    |     | NB  |     | SB    |     |     |       |  |  |
|-----------------------|-------|-------|-----|-----|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0     |     | 29  |     | 23.9  |     |     |       |  |  |
| HCM LOS               |       |       |     | D   |     | C     |     |     |       |  |  |
| <hr/>                 |       |       |     |     |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 153   | -     | 982 | -   | -   | 781   | -   | -   | 192   |  |  |
| HCM Lane V/C Ratio    | 0.021 | -     | -   | -   | -   | 0.003 | -   | -   | 0.005 |  |  |
| HCM Control Delay (s) | 29    | 0     | 0   | -   | -   | 9.6   | -   | -   | 23.9  |  |  |
| HCM Lane LOS          | D     | A     | A   | -   | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -   | -   | 0     | -   | -   | 0     |  |  |

**Intersection**

Int Delay, s/veh 0.6

| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      | ↑↑   |      | ↑    | ↑↑   | ↑    | ↑    |
| Traffic Vol, veh/h       | 823  | 36   | 8    | 557  | 35   | 7    |
| Future Vol, veh/h        | 823  | 36   | 8    | 557  | 35   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 75   | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 895  | 39   | 9    | 605  | 38   | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 934    | 0 | 1236 467  |
| Stage 1              | -      | -      | -      | - | 915 -     |
| Stage 2              | -      | -      | -      | - | 321 -     |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 6.94 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 -    |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 3.32 |
| Pot Cap-1 Maneuver   | -      | -      | 729    | - | 168 542   |
| Stage 1              | -      | -      | -      | - | 351 -     |
| Stage 2              | -      | -      | -      | - | 708 -     |
| Platoon blocked, %   | -      | -      | -      | - | -         |
| Mov Cap-1 Maneuver   | -      | -      | 729    | - | 166 542   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 277 -     |
| Stage 1              | -      | -      | -      | - | 351 -     |
| Stage 2              | -      | -      | -      | - | 700 -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.1 | 18.7 |
| HCM LOS              |    | C   |      |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 277   | 542   | -   | -   | 729   | -   |
| HCM Lane V/C Ratio    | 0.137 | 0.014 | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 20.1  | 11.7  | -   | -   | 10    | -   |
| HCM Lane LOS          | C     | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.5   | 0     | -   | -   | 0     | -   |

## Intersection

Int Delay, s/veh 0.2

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗    | ↖ ↗  | ↑ ↗  | ↗    |      | ↖ ↗  | ↗    |      | ↖ ↗  |      |
| Traffic Vol, veh/h       | 0    | 822  | 3    | 3    | 565  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Future Vol, veh/h        | 0    | 822  | 3    | 3    | 565  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 865  | 3    | 3    | 595  | 6    | 4    | 0    | 0    | 2    | 0    | 0    |

| Major/Minor          | Major1 |   | Major2 |      | Minor1 |   | Minor2 |      |      |      |      |      |
|----------------------|--------|---|--------|------|--------|---|--------|------|------|------|------|------|
| Conflicting Flow All | 601    | 0 | 0      | 868  | 0      | 0 | 1169   | 1472 | 433  | 1034 | 1469 | 298  |
| Stage 1              | -      | - | -      | -    | -      | - | 865    | 865  | -    | 601  | 601  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 304    | 607  | -    | 433  | 868  | -    |
| Critical Hdwy        | 4.14   | - | -      | 4.14 | -      | - | 7.54   | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | - | -      | -    | -      | - | 6.54   | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | -      | -    | -      | - | 6.54   | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | -      | 2.22 | -      | - | 3.52   | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 972    | - | -      | 772  | -      | - | 148    | 126  | 571  | 186  | 126  | 698  |
| Stage 1              | -      | - | -      | -    | -      | - | 315    | 369  | -    | 454  | 488  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 681    | 485  | -    | 571  | 368  | -    |
| Platoon blocked, %   | -      | - | -      | -    | -      | - | -      | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 972    | - | -      | 772  | -      | - | 148    | 125  | 571  | 185  | 125  | 698  |
| Mov Cap-2 Maneuver   | -      | - | -      | -    | -      | - | 148    | 125  | -    | 185  | 125  | -    |
| Stage 1              | -      | - | -      | -    | -      | - | 315    | 369  | -    | 454  | 486  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 678    | 483  | -    | 571  | 368  | -    |

| Approach              | EB    | WB    | NB  | SB   |     |       |     |     |       |  |  |
|-----------------------|-------|-------|-----|------|-----|-------|-----|-----|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   | 30  | 24.7 |     |       |     |     |       |  |  |
| HCM LOS               |       | D     | C   |      |     |       |     |     |       |  |  |
| <hr/>                 |       |       |     |      |     |       |     |     |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT  | EBR | WBL   | WBT | WBR | SBLn1 |  |  |
| Capacity (veh/h)      | 148   | -     | 972 | -    | -   | 772   | -   | -   | 185   |  |  |
| HCM Lane V/C Ratio    | 0.028 | -     | -   | -    | -   | 0.004 | -   | -   | 0.011 |  |  |
| HCM Control Delay (s) | 30    | 0     | 0   | -    | -   | 9.7   | -   | -   | 24.7  |  |  |
| HCM Lane LOS          | D     | A     | A   | -    | -   | A     | -   | -   | C     |  |  |
| HCM 95th %tile Q(veh) | 0.1   | -     | 0   | -    | -   | 0     | -   | -   | 0     |  |  |

**Intersection**

Int Delay, s/veh 0.6

| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      | ↑↑   |      | ↑    | ↑↑   | ↑    | ↑    |
| Traffic Vol, veh/h       | 837  | 36   | 8    | 567  | 35   | 7    |
| Future Vol, veh/h        | 837  | 36   | 8    | 567  | 35   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 75   | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 910  | 39   | 9    | 616  | 38   | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |           |
|----------------------|--------|--------|--------|---|-----------|
| Conflicting Flow All | 0      | 0      | 949    | 0 | 1256 475  |
| Stage 1              | -      | -      | -      | - | 930 -     |
| Stage 2              | -      | -      | -      | - | 326 -     |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 6.94 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 -    |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 3.32 |
| Pot Cap-1 Maneuver   | -      | -      | 719    | - | 163 536   |
| Stage 1              | -      | -      | -      | - | 344 -     |
| Stage 2              | -      | -      | -      | - | 704 -     |
| Platoon blocked, %   | -      | -      | -      | - | -         |
| Mov Cap-1 Maneuver   | -      | -      | 719    | - | 161 536   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 271 -     |
| Stage 1              | -      | -      | -      | - | 344 -     |
| Stage 2              | -      | -      | -      | - | 695 -     |

| Approach             | EB | WB  | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 0.1 | 19 |
| HCM LOS              |    |     | C  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 271   | 536   | -   | -   | 719   | -   |
| HCM Lane V/C Ratio    | 0.14  | 0.014 | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 20.4  | 11.8  | -   | -   | 10.1  | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.5   | 0     | -   | -   | 0     | -   |

## Intersection

Int Delay, s/veh 0.3

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑ ↗  | ↑ ↗  | ↗ ↗  | ↖ ↗  | ↑ ↗  | ↗ ↗  | ↗ ↗  | ↖ ↗  | ↗ ↗  | ↗ ↗  | ↖ ↗  | ↖ ↗  |
| Traffic Vol, veh/h       | 0    | 952  | 5    | 5    | 653  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Future Vol, veh/h        | 0    | 952  | 5    | 5    | 653  | 10   | 5    | 0    | 0    | 5    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 65   | -    | 95   | 60   | -    | 65   | -    | -    | 40   | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 1035 | 5    | 5    | 710  | 11   | 5    | 0    | 0    | 5    | 0    | 0    |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 721    | 0      | 0 | 1040 | 0      | 0 | 1400 | 1766   | 518  | 1238 | 1760 | 355  |
| Stage 1              | -      | -      | - | -    | -      | - | 1035 | 1035   | -    | 720  | 720  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 365  | 731    | -    | 518  | 1040 | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 877    | -      | - | 664  | -      | - | 100  | 83     | 502  | 132  | 84   | 641  |
| Stage 1              | -      | -      | - | -    | -      | - | 248  | 307    | -    | 385  | 430  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 627  | 425    | -    | 509  | 306  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 877    | -      | - | 664  | -      | - | 99   | 82     | 502  | 131  | 83   | 641  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 99   | 82     | -    | 131  | 83   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 248  | 307    | -    | 385  | 427  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 622  | 422    | -    | 509  | 306  | -    |

| Approach              | EB    | WB    |     |     | NB   |       |     | SB   |       |  |  |
|-----------------------|-------|-------|-----|-----|------|-------|-----|------|-------|--|--|
| HCM Control Delay, s  | 0     | 0.1   |     |     | 43.5 |       |     | 33.7 |       |  |  |
| HCM LOS               |       |       |     |     | E    |       |     | D    |       |  |  |
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR  | WBL   | WBT | WBR  | SBLn1 |  |  |
| Capacity (veh/h)      | 99    | -     | 877 | -   | -    | 664   | -   | -    | 131   |  |  |
| HCM Lane V/C Ratio    | 0.055 | -     | -   | -   | -    | 0.008 | -   | -    | 0.041 |  |  |
| HCM Control Delay (s) | 43.5  | 0     | 0   | -   | -    | 10.5  | -   | -    | 33.7  |  |  |
| HCM Lane LOS          | E     | A     | A   | -   | -    | B     | -   | -    | D     |  |  |
| HCM 95th %tile Q(veh) | 0.2   | -     | 0   | -   | -    | 0     | -   | -    | 0.1   |  |  |

**Intersection**

Int Delay, s/veh 0.6

| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      | ↑↑   |      | ↑    | ↑↑   | ↑    | ↑    |
| Traffic Vol, veh/h       | 975  | 36   | 8    | 660  | 35   | 7    |
| Future Vol, veh/h        | 975  | 36   | 8    | 660  | 35   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 75   | -    | 0    | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1060 | 39   | 9    | 717  | 38   | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 1099   | 0 | 1457 |
| Stage 1              | -      | -      | -      | - | 1080 |
| Stage 2              | -      | -      | -      | - | 377  |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 |
| Pot Cap-1 Maneuver   | -      | -      | 631    | - | 120  |
| Stage 1              | -      | -      | -      | - | 287  |
| Stage 2              | -      | -      | -      | - | 663  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 631    | - | 118  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 225  |
| Stage 1              | -      | -      | -      | - | 287  |
| Stage 2              | -      | -      | -      | - | 654  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.1 | 22.3 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 225   | 479   | -   | -   | 631   | -   |
| HCM Lane V/C Ratio    | 0.169 | 0.016 | -   | -   | 0.014 | -   |
| HCM Control Delay (s) | 24.2  | 12.6  | -   | -   | 10.8  | -   |
| HCM Lane LOS          | C     | B     | -   | -   | B     | -   |
| HCM 95th %tile Q(veh) | 0.6   | 0     | -   | -   | 0     | -   |