

**Date:** June 17, 2026  
**To:** City of Boardman Planning Commission  
**From:** Myla Cross  
Melissa Webb, PE  
Todd Mobley, PE  
**Project Name:** Wilson Road SW – Boardman  
**AKS Job No.:** 13849  
**Project Site:** 501 Wilson Lane, Boardman, OR

**Subject:** Boardman Wilson Lane Site Design Review  
ODOT Comment Response Memorandum



## Introduction

This memorandum is written in response to comments received by ODOT staff regarding the revised *Boardman Wilson Lane Site Design Review Transportation Impact Study (TIS)*, dated May 11, 2026, and may serve as an addendum to the TIS. AKS Engineering prepared the traffic study for the proposed development, which will include 240 residential apartment units, with a mix of 1-, 2-, and 3-bedroom units. The project site is located at 501 Wilson Lane SW in Boardman, Oregon.

The prior traffic analysis was updated in response to the comments received from ODOT. The revised analysis does have slightly higher traffic volumes and a proportionate increase in congestion. Still, the overall findings of the analysis are consistent with the prior study. Any operational problems at the Main Street interchange will occur even without the proposed development. It would be disproportional with the project's traffic impacts to require construction of interchange improvements. Rather, the City of Boardman and ODOT are in the process of identifying appropriate improvements for the interchange via an updated Interchange Area Management Plan, which is the appropriate venue to consider needed long-term improvements. The City has proposed a fee in lieu of a future Transportation SDC, which the applicant has agreed to. The applicant is making a fair-share contribution of \$100,000 that can be used to help fund improvements.

ODOT comments are shown below in ***bolded italics*** followed by the AKS response.

## ODOT Comments Response

### EXECUTIVE SUMMARY

***Item 2: This development was not previously understood to be scoped or analyzed as a phased development. A phased development of this size should be evaluated at each year of opening and 5 years beyond buildout. Is the intent that both phases are complete by 2028?***

Both phases of the proposed development are planned to be completed by 2028. Accordingly, the 2028 buildout conditions analyzed in the TIS represent a conservative worst-case scenario in which all dwelling units are occupied. Consistent with ODOT's request to evaluate conditions beyond project completion, the TIS also includes a 2033 Future Year analysis representing conditions five years beyond buildout.

The additional phasing scenarios requested by ODOT would not materially alter the findings of the study. The transportation deficiencies identified are present under background conditions independent of the proposed development and remain present under all analyzed scenarios. Therefore, the 2028 buildout and 2033 future year conditions provide an appropriate basis for evaluating the transportation impacts of the proposed development.

***Item 7: Previous comments were not addressed. Meeting signal warrants is not in and of itself a trigger for signal installation. Recommend using a signal warrant in one of 9 criteria within OAR 734-020-0430 - Traffic Signal Approval. Criteria 3 required an engineering investigation to show "that signal installation would . . . improve the overall safety and operation of the intersection."***

The discussion of signal warrants in the TIS was intended to identify whether the proposed development would independently trigger future signalization requirements. The analysis demonstrates that applicable signal warrants are already satisfied under existing conditions at the interchange ramp intersections, prior to development of the project.

The appropriate improvement at these intersections remains under discussion between the City of Boardman and ODOT as part of ongoing coordination regarding interchange operations and future improvements. While no specific improvement project has been identified to date, the City has proposed a fee in lieu of a future Transportation SDC, which the applicant has agreed to. The applicant is making a fair-share contribution of \$100,000 that can be used to help fund improvements.

Given that signal warrants are satisfied independent of the proposed development and that the City and ODOT continue to evaluate the most effective mitigation strategy, the applicant's contribution represents a reasonable and proportionate share in future transportation improvements.

***Item 9: Previous comments were not addressed. Triggers for improvements are based on mobility standards (v/c ratio) and are met.***

The applicant acknowledges ODOT's comment regarding mobility-based triggers identified in the 2009 Interchange Area Management Plan (IAMP). Future interchange mitigation is currently being coordinated between the City of Boardman and ODOT via an updated IAMP that is just beginning work. The City has proposed a fee in lieu of a future Transportation SDC, which the applicant has agreed to. The applicant is making a fair-share contribution of \$100,000 that can be used to help fund improvements.

Accordingly, specific improvements will be addressed through the ongoing City/ODOT coordination process.

***Item 10: No agreement between ODOT and the City to date***

The applicant acknowledges that an agreement between ODOT and the City has not yet been executed. Development of any future agreement is outside the applicant's control and will be coordinated between the City and ODOT as part of ongoing interchange planning efforts.

***Item 12: Per the development review guidelines – "In cases where a TIA includes a queue analysis for an Interstate or Expressway off-ramp, vehicles should have enough stopping sight distance (determined from the recent AASHTO A Policy on Geometric Design of Highways and Streets) to decelerate from the beginning of the off-ramp to stop at the end of the 95th-percentile queue. If the total traffic does not allow reasonable stopping sight distance, the TIA should state what if any mitigation measure(s) would reduce the queue on the off-ramp. Any methodology used to determine queue lengths must be approved by the Region Access Management Engineer or his/her designee."***

The applicant acknowledges ODOT's comment regarding stopping sight distance and 95<sup>th</sup> percentile queue lengths at the I-84 interchange ramps. ODOT has identified that approximately 730 feet of stopping sight distance is needed for a vehicle to decelerate from the beginning of the off-ramp to the back of the 95<sup>th</sup> percentile queue. Based on the queue lengths identified in the analysis, the available distance between the beginning of the off-ramp and the back of the 95<sup>th</sup> percentile queue is less than 730 feet under certain conditions.

However, due to the relatively straight horizontal alignment of I-84 in the vicinity of the interchange, available sight distance appears to extend well beyond the beginning of the off-ramps in both directions. Drivers planning to exit the freeway at this interchange have clear line of sight and will be looking at traffic on the ramp before leaving the freeway mainline. Additionally, the analysis does not indicate that queues are projected to extend back onto the I-84 mainline.

The identified queueing condition is part of a broader existing interchange operational issue that is present under background conditions independent of the proposed development. ODOT and the City of Boardman are currently coordinating an agreement to address future interchange mitigation and operational improvements. The City has proposed a fee in lieu of a future Transportation SDC, which the applicant has agreed to. The applicant is making a fair-share contribution of \$100,000 that can be used to help fund improvements.

Accordingly, while ODOT's comment is acknowledged, it does not materially alter the findings or conclusions of the TIS regarding the transportation impacts attributable to the proposed development.

#### **SITE TRIPS**

***This development was not previously understood to be scoped or analyzed as a phased development. A phased development of this size should be evaluated at each year of opening and 5 years beyond buildout.***

Please refer to the response to Executive Summary Item 2 above.

#### **TRAFFIC VOLUMES**

***Existing Conditions: Previous comments were not addressed – 16 hour counts should have been utilized at traffic signals as the current solution to mobility failure in the current and active IAMP. Recommend using the publicly available counts utilized in the TSP and seasonally adjusting using the same methodology and values as the TSP.***

***Seasonal adjustment factor should be applied equally to all movements. Highway is a general term, that does not necessarily mean the state highway. Highway definition per the MUTCD 11th Edition “a general term for denoting a public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right of way.” Applying the seasonal adjustment factor to all movements properly scales the traffic count data as required to estimate the existing conditions at the highest hour. The existing method undercounts traffic on the local system by hundreds of vehicles and results in an inconclusive analysis.***

***The seasonal factor, having not been applied to any local intersections resulted in an under count of queueing at the interchange.***

***Network balancing needs to occur.***

***Figure 4: Missing seasonal adjustment factor on main street at the interchange ramps.***

***Figure 5: Missing seasonal adjustment factor on main street at the interchange ramps.***

***Figure 6: Missing seasonal adjustment factor on main street at the interchange ramps.***

***Figure 7: Missing seasonal adjustment factor on main street at the interchange ramps. Additionally, many values are not accurate.***

At ODOT's request, publicly available 16-hour traffic counts that were collected on Tuesday, May 21, 2024, and were utilized in the Boardman TSP were obtained and incorporated into this updated analysis for the Main Street interchange area, which includes the following intersections:

6. S Main Street & S Front Street
7. S Main Street & I-84 EB ramps
8. N Main Street & I-84 WB ramps
9. N Main Street & N Front Street

The counts were adjusted to 2026 conditions using a 2 percent annual growth rate, seasonally adjusted using the same methodology applied in the TSP and balanced within the study network. The operational and queue analyses were subsequently updated using the revised traffic volumes.

The revised capacity and queuing analysis results are presented in Table 1 and Table 2, respectively. Updated traffic volume figures reflecting the revised counts, seasonal adjustment methodology, and balancing process are included as an attachment to this memorandum.

**Table 1: Capacity Analysis Summary**

| Intersection & Condition          | Performance Standard | AM Peak Hour |           |             | PM Peak Hour |           |             |
|-----------------------------------|----------------------|--------------|-----------|-------------|--------------|-----------|-------------|
|                                   |                      | LOS          | Delay (s) | v/c         | LOS          | Delay (s) | v/c         |
| 6. S Main Street & S Front Street |                      |              |           |             |              |           |             |
| 2026 Existing Conditions          | LOS C                | <u>D</u>     | 25        | 0.09        | <u>E</u>     | 38        | 0.25        |
| 2028 Background Conditions        |                      | <u>E</u>     | 47        | 0.51        | <u>F</u>     | >100      | 0.94        |
| 2028 Buildout Conditions          |                      | <u>F</u>     | 58        | 0.57        | <u>F</u>     | >100      | 1.07        |
| 2033 Future Conditions            |                      | <u>F</u>     | 83        | 0.70        | <u>F</u>     | >100      | 1.36        |
| 7. S Main Street & I-84 EB Ramps  |                      |              |           |             |              |           |             |
| 2026 Existing Conditions          | 0.85                 | C            | 15        | 0.05        | D            | 29        | 0.36        |
| 2028 Background Conditions        |                      | C            | 17        | 0.08        | E            | 38        | 0.47        |
| 2028 Buildout Conditions          |                      | C            | 18        | 0.09        | E            | 43        | 0.51        |
| 2033 Future Conditions            |                      | C            | 19        | 0.10        | F            | 63        | 0.65        |
| 8. N Main Street & I-84 WB Ramps  |                      |              |           |             |              |           |             |
| 2026 Existing Conditions          | 0.85                 | E            | 42        | 0.63        | F            | 99        | <u>0.96</u> |
| 2028 Background Conditions        |                      | F            | >100      | <u>1.06</u> | F            | >100      | <u>1.61</u> |
| 2028 Buildout Conditions          |                      | F            | >100      | <u>1.21</u> | F            | >100      | <u>1.90</u> |
| 2033 Future Conditions            |                      | F            | >100      | <u>1.51</u> | F            | >100      | <u>2.43</u> |
| 9. N Main Street & N Front Street |                      |              |           |             |              |           |             |
| 2026 Existing Conditions          | LOS C                | C            | 21        | 0.26        | <u>E</u>     | 36        | 0.39        |
| 2028 Background Conditions        |                      | <u>D</u>     | 31        | 0.39        | <u>E</u>     | 49        | 0.54        |
| 2028 Buildout Conditions          |                      | <u>D</u>     | 33        | 0.39        | <u>F</u>     | 54        | 0.57        |
| 2033 Future Conditions            |                      | <u>E</u>     | 44        | 0.50        | <u>F</u>     | 90        | 0.76        |

Notes: **BOLDED** text indicated locations where jurisdictional standards are exceeded.

**Table 2: 95<sup>th</sup> Percentile Queueing Analysis Summary**

| Intersection/Movement             | Available Storage (ft) | 2028 Background Queue (ft) |         | 2028 Buildout Queue (ft) |         | 2033 Future Queue (ft) |         |
|-----------------------------------|------------------------|----------------------------|---------|--------------------------|---------|------------------------|---------|
|                                   |                        | Morning                    | Evening | Morning                  | Evening | Morning                | Evening |
| 6. S Main Street & S Front Street |                        |                            |         |                          |         |                        |         |
| EB Approach                       | 325                    | 100                        | 200     | 100                      | 325     | 100                    | 225     |
| WB Left-Through                   | 125                    | 25                         | 50      | 50                       | 50      | 50                     | 50      |
| WB Right                          | 125                    | 50                         | 75      | 50                       | 75      | 50                     | 75      |
| NB Left                           | 125                    | 0                          | 25      | 0                        | 25      | 0                      | 25      |
| NB Through-Right                  | 250                    | 0                          | 25      | 25                       | 25      | 25                     | 25      |
| SB Left                           | 100                    | 25                         | 50      | 25                       | 50      | 25                     | 50      |
| 7. S Main Street & I-84 EB Ramps  |                        |                            |         |                          |         |                        |         |
| EB Left-Through                   | 1,000                  | 475                        | 550     | 500                      | 650     | 625                    | 825     |
| EB Right                          | 25                     | 75                         | 100     | 75                       | 75      | 75                     | 75      |
| NB Through-Right                  | 150                    | 25                         | 150     | 25                       | 25      | 25                     | 25      |
| SB Left-Through                   | 500                    | 125                        | 200     | 125                      | 250     | 150                    | 250     |
| 8. N Main Street & I-84 WB Ramps  |                        |                            |         |                          |         |                        |         |
| WB Left-Through                   | >1,000                 | 250                        | 700     | 275                      | 625     | 375                    | 600     |
| WB Right                          | 25                     | 75                         | 75      | 75                       | 75      | 75                     | 75      |
| NB Left-Through                   | 500                    | 75                         | 150     | 75                       | 125     | 75                     | 200     |
| SB Through-Right                  | 100                    | 0                          | 25      | 0                        | 75      | 25                     | 75      |
| 9. N Main Street & N Front Street |                        |                            |         |                          |         |                        |         |
| EB Left-Through                   | 325                    | 50                         | 25      | 50                       | 25      | 50                     | 25      |
| EB Right                          | 100                    | 50                         | 75      | 50                       | 75      | 50                     | 75      |
| WB Approach                       | 325                    | 50                         | 75      | 75                       | 100     | 50                     | 75      |
| NB Left                           | 75                     | 25                         | 50      | 25                       | 50      | 25                     | 50      |
| NB Through-Right                  | 100                    | 25                         | 0       | 0                        | 0       | 0                      | 25      |
| SB Left                           | 100                    | 25                         | 25      | 25                       | 25      | 25                     | 25      |

Table Notes: **BOLDED** values indicate queue lengths longer than available storage

The revised analysis results in higher traffic volumes and corresponding increases in delay and volume-to-capacity ratios at the Main Street interchange area intersections compared to the prior analysis. In particular, the updated analysis confirms that all operational deficiencies identified at the interchange area intersections are present under both background and buildout conditions, independent of the proposed development.

While the revised analysis results in increased delay and v/c ratios relative to the original analysis, the PM peak hour remains the critical period for interchange operations and the revised queue analysis indicates no substantial change to the previously identified 95th percentile queue lengths at the interchange ramps. The updated analysis continues to demonstrate that the identified interchange operational deficiencies are part of a broader existing transportation system issue that is not solely attributable to the proposed development. Accordingly, the revised analysis does not materially alter the mitigation conclusions of the TIS.

***Should have an additional traffic count for 2033 in the background condition.***

The purpose of the 2033 analysis was to evaluate conditions five years beyond the anticipated 2028 buildout year, consistent with ODOT's request. The 2033 scenario therefore represents future conditions with the proposed development in place. Because the operational deficiencies identified at the Main Street interchange are present under background conditions independent of the proposed development, preparation of a separate 2033 background scenario would not materially alter the findings or conclusions of the TIS. In addition, there is no obligation for the applicant to mitigate future conditions beyond site build out, so a comparative 'with and without the project' analysis in 2033 is not necessary. Accordingly, the 2033 buildout analysis provides an appropriate basis for evaluating future transportation impacts associated with the proposed development.

***In process traffic was not identified or quantified, although appears to have been included in the analysis.***

In-process development traffic was identified and included in the background traffic forecasts used for the analysis. The Woodspring Suites development prepared a trip generation and distribution letter, which is included in Appendix B and was incorporated into the background traffic forecasts. The Burger King/gas station development was not required to prepare a Transportation Impact Analysis; therefore, trip generation was estimated using applicable ITE Trip Generation rates and included in the background traffic forecasts.

Accordingly, in-process development traffic was both identified and quantified as part of the analysis.

#### OPERATIONAL ANALYSIS

##### ***Delay and Capacity Analysis***

***The network is not balanced, which will affect all results. See APM 5.6.1.***

Please refer to the response above. Publicly available 16-hour traffic counts utilized in the Boardman TSP were obtained, seasonally adjusted using the TSP methodology, balanced within the study network, and incorporated into an updated operational analysis. The revised traffic volume figures are included as an attachment to this memorandum.

***Analysis should account for phasing, see previous comments, and background 2033 conditions.***

Please refer to the responses to Executive Summary Item 2 and the Site Trips comment above.

***Interchange analysis is missing a large volume of trips due to incorrect application of the seasonal adjustment factor. V/C ratios may increase.***

Seasonal adjustment factors were applied to all movements at the four Main Street interchange area intersections in the revised analysis. The updated traffic volumes were balanced and incorporated into revised capacity and queue analyses. While the revised analysis resulted in somewhat higher traffic volumes and corresponding increases in delay, particularly during the AM peak hour, the overall conclusions of the TIS remain unchanged. Updated capacity and queue results are presented in Table 1 and Table 2, respectively.

***Per the development review guidelines – “In cases where a TIA includes a queue analysis for an Interstate or Expressway off-ramp, vehicles should have enough stopping sight distance (determined from the recent AASHTO A Policy on Geometric Design of Highways and Streets) to decelerate from the beginning of the off-ramp to stop at the end of the 95th-percentile queue. If the total traffic does not allow reasonable stopping sight distance, the TIA should state what if any mitigation measure(s) would reduce the queue on the off-ramp. Any methodology used to determine queue lengths must be approved by the Region Access Management Engineer or his/her designee.”***

**70 MPH, at 2% grade, stopping sight distance would be 730 feet.**

**The queue length exceeds available storage at both interchange ramps.**

Please refer to the response to Executive Summary Item 12. The applicant acknowledges ODOT's concerns regarding stopping sight distance and queue storage at the I-84 interchange ramps. As discussed above, the analysis does not indicate that queues are projected to extend back onto the I-84 mainline, and ODOT and the City of Boardman are currently coordinating on future interchange mitigation and operational improvements.

#### **MITIGATION ANALYSIS**

**Analysis and Summary sections indicate two intersections exceed acceptable levels of operation per ODOT and City performance targets. This section states three.**

The applicant acknowledges this inconsistency. Two intersections are identified as exceeding applicable ODOT or City performance standards under the analyzed conditions.

**IAMP triggers for mitigation at the interchange ramps are the v/c ratio and are met.**

The applicant acknowledges ODOT's comment regarding mobility-based mitigation triggers identified in the 2009 Interchange Area Management Plan (IAMP). The need for future interchange improvements is currently being coordinated between the City of Boardman and ODOT as part of ongoing discussions regarding interchange operations and mitigation measures.

The City has proposed a fee in lieu of a future Transportation SDC, which the applicant has agreed to. The applicant is making a fair-share contribution of \$100,000 that can be used to help fund improvements. The identified interchange deficiencies are not solely attributable to the proposed development and are present under background conditions independent of the project.

**ODOT cannot recreate results with the consultant's synchro file, at least for the queue analysis.**

Noted. The Synchro model was developed using the assumptions and methodologies documented in the TIS. The queuing analysis was prepared with *SimTraffic*, which incorporates an iterative process with multiple analysis runs and randomized seeding of the transportation system for each iteration. The applicant remains available to coordinate with ODOT regarding model inputs, assumptions, and calculations if needed.

#### **CONCLUSIONS**

**The queue length exceeds available storage at both interchange ramps.**

Noted. Please refer to the responses to Executive Summary Item 12 and Operational Analysis comments above. While the available distance between the beginning of the off-ramp and the back of the 95<sup>th</sup> percentile queue may be less than the stopping sight distance identified by ODOT under certain conditions, the interchange ramps are approximately 1,230 feet in length and available sight distance appears to extend beyond the beginning of the off-ramps due to the relatively straight horizontal alignment of I-84 in the vicinity. Additionally, the analysis does not indicate that queues are projected to extend back onto the I-84 mainline. ODOT and the City of Boardman are currently coordinating on future interchange mitigation and operational improvements.

**Interim measures to address the queue length should be constructed prior to day of opening.**

The queuing on the interchange ramps is a product of area-wide traffic that is already on the system. The proposed development is only one small contributor to an operational problem that exists even with no development on the subject property. Freeway ramp widening would be disproportional to the traffic impacts resulting from the proposed development.



water

Attachments:

*Figure 4: Traffic Volumes – Year 2026 Existing Conditions*

*Figure 5 Traffic Volumes – Year 2028 Background Conditions*

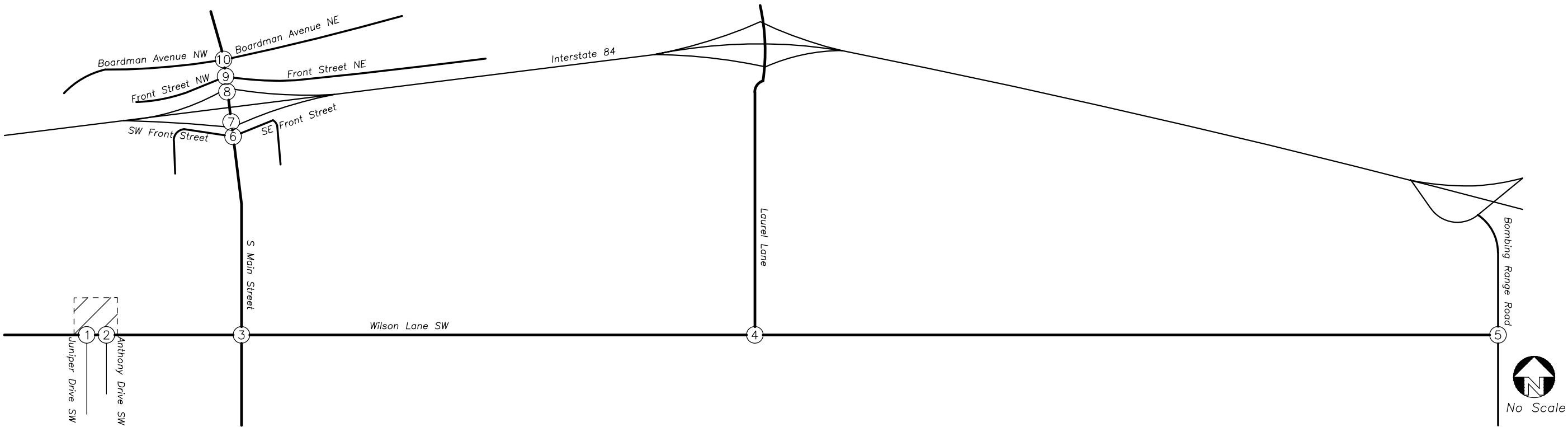
*Figure 6: Traffic Volumes - Year 2028 Buildout Conditions*

*Figure 7: Traffic Volumes – Year 2033 Future Conditions*

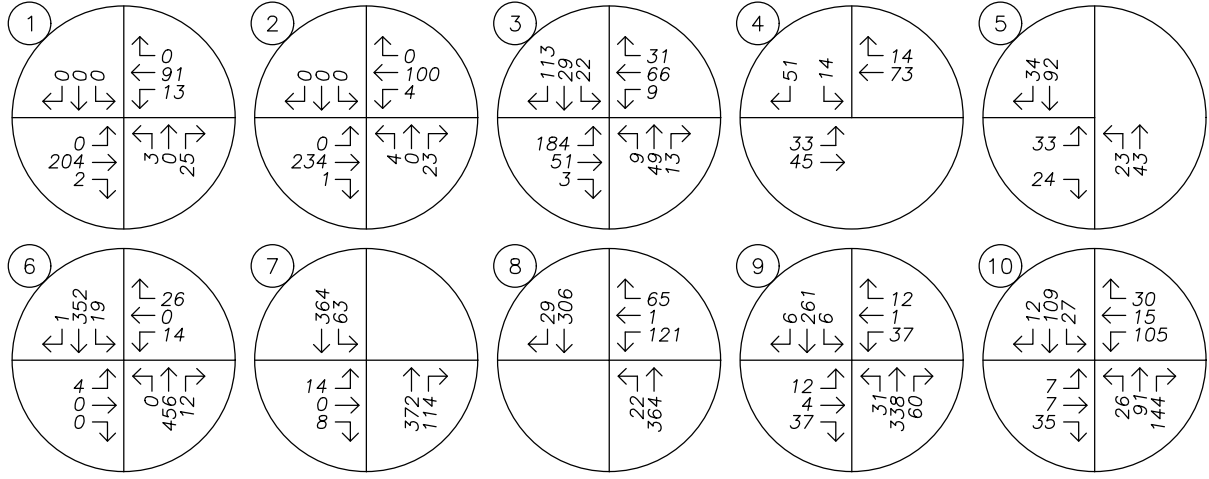
*Figure A: Traffic Volumes – In-Process Developments*

*Synchro Outputs*

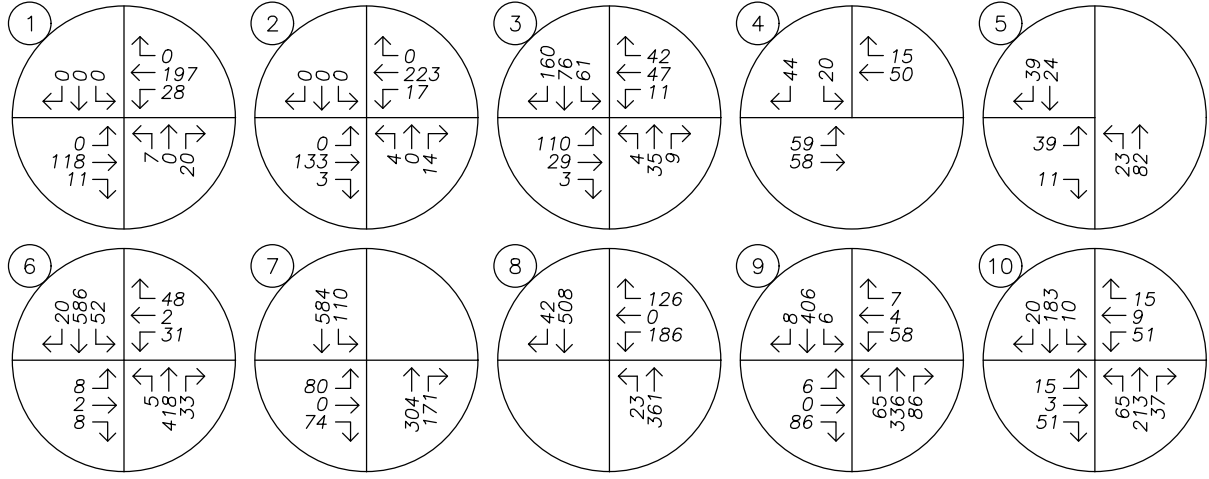


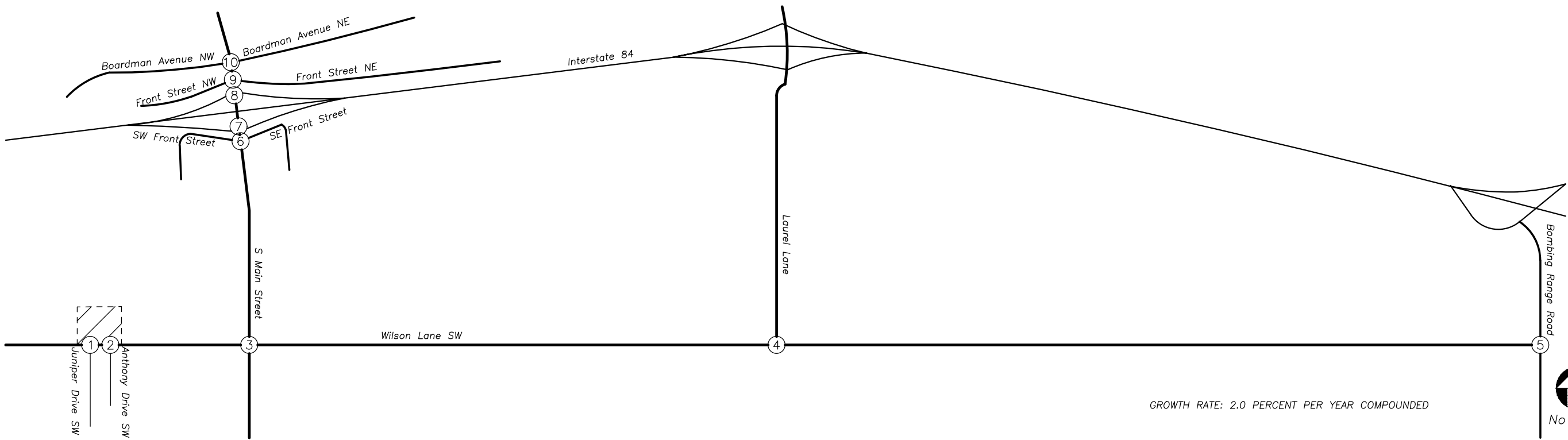


AM PEAK HOUR



PM PEAK HOUR



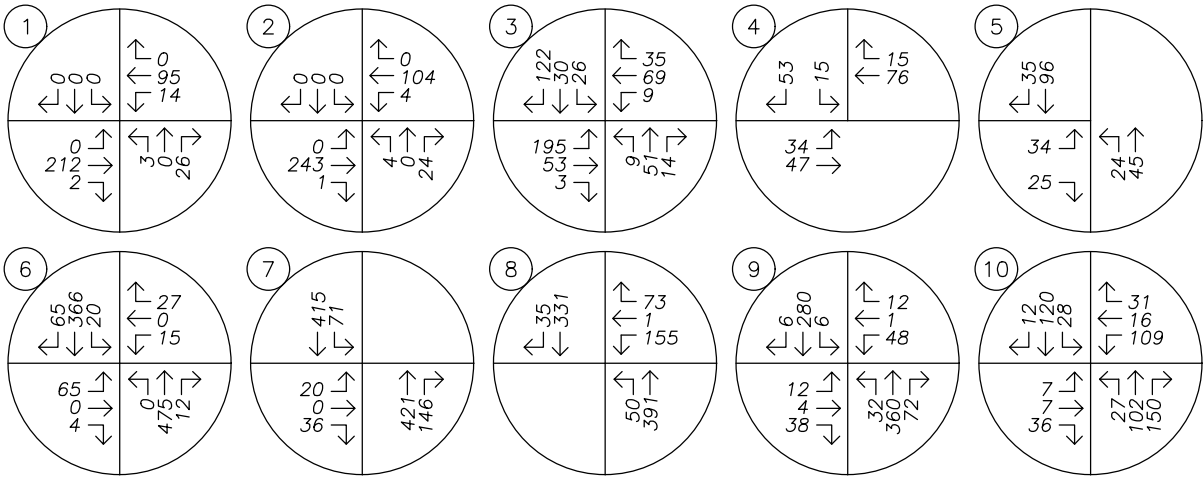


GROWTH RATE: 2.0 PERCENT PER YEAR COMPOUNDED

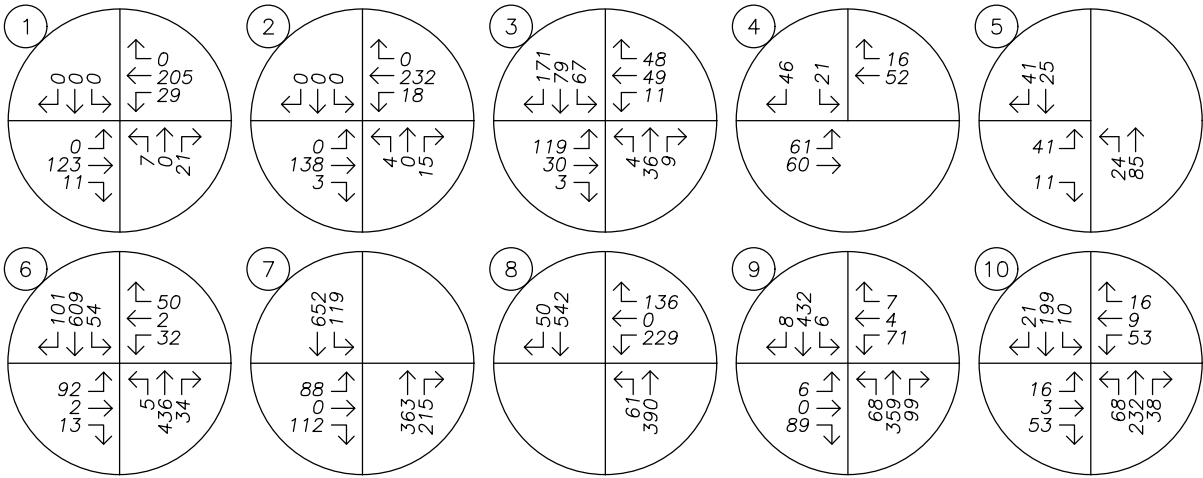


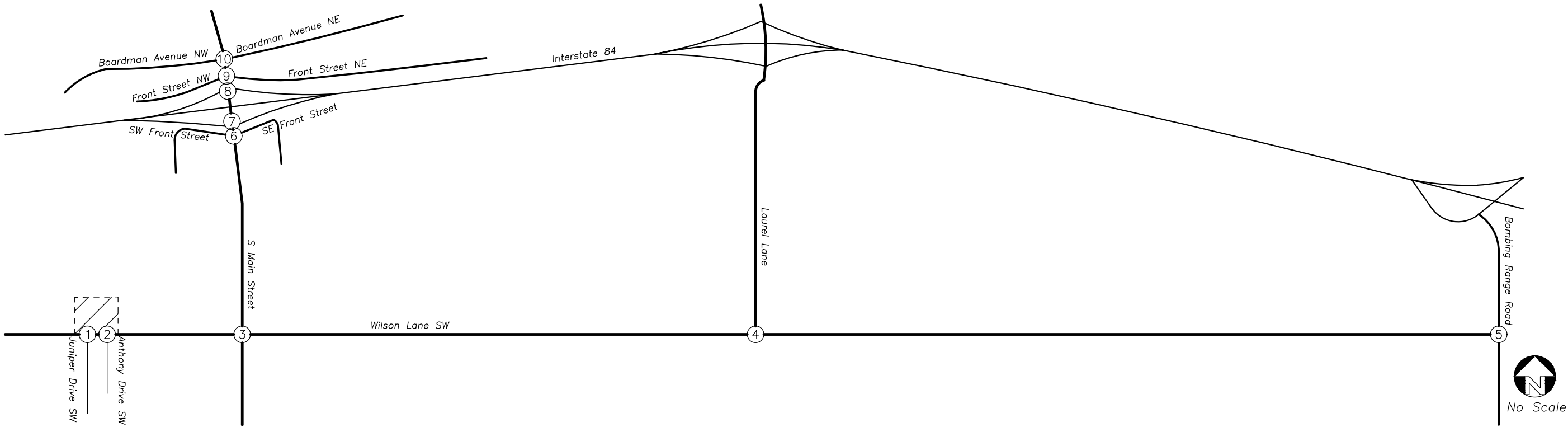
No Scale

AM PEAK HOUR

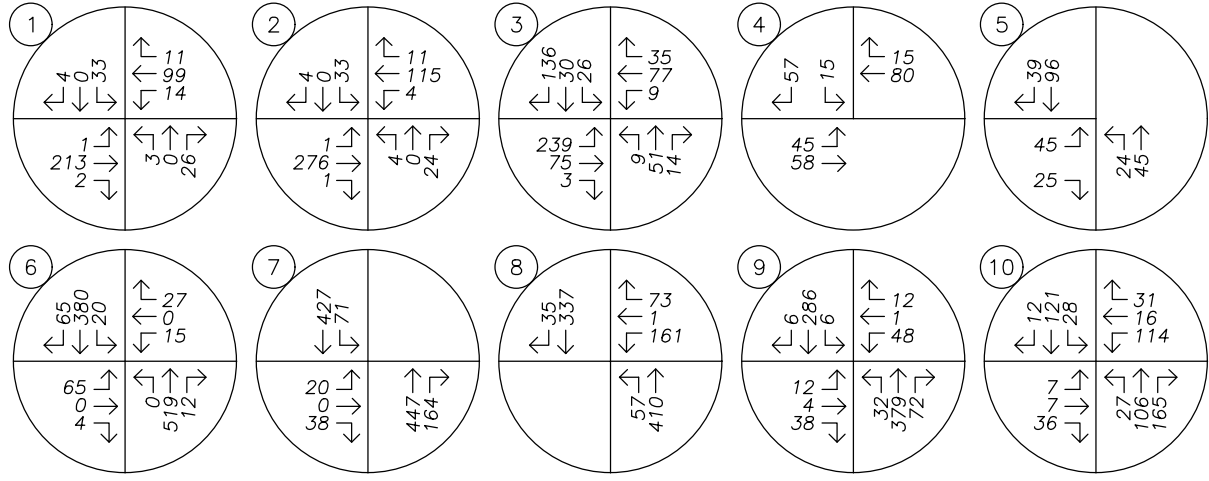


PM PEAK HOUR

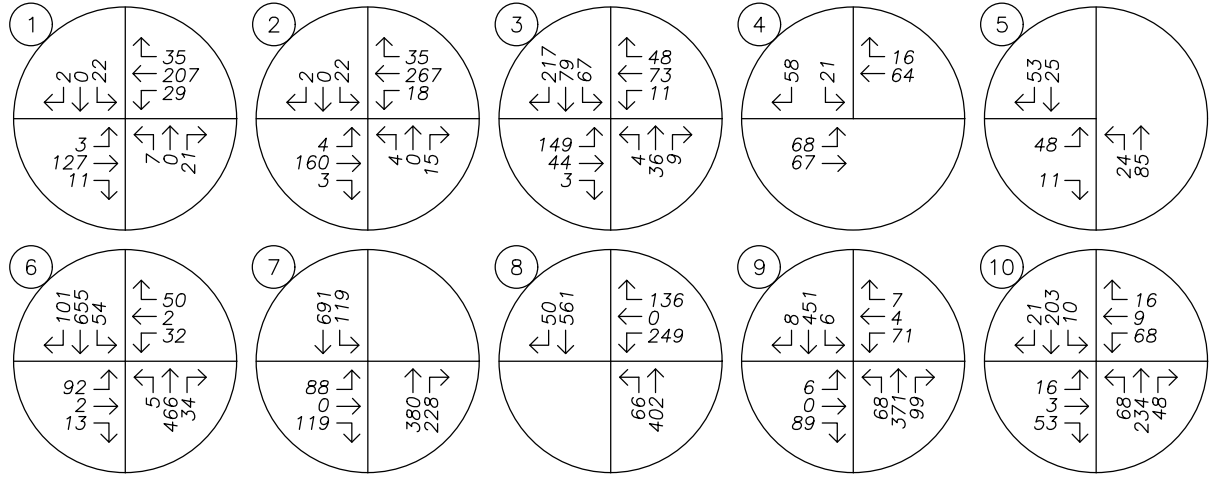


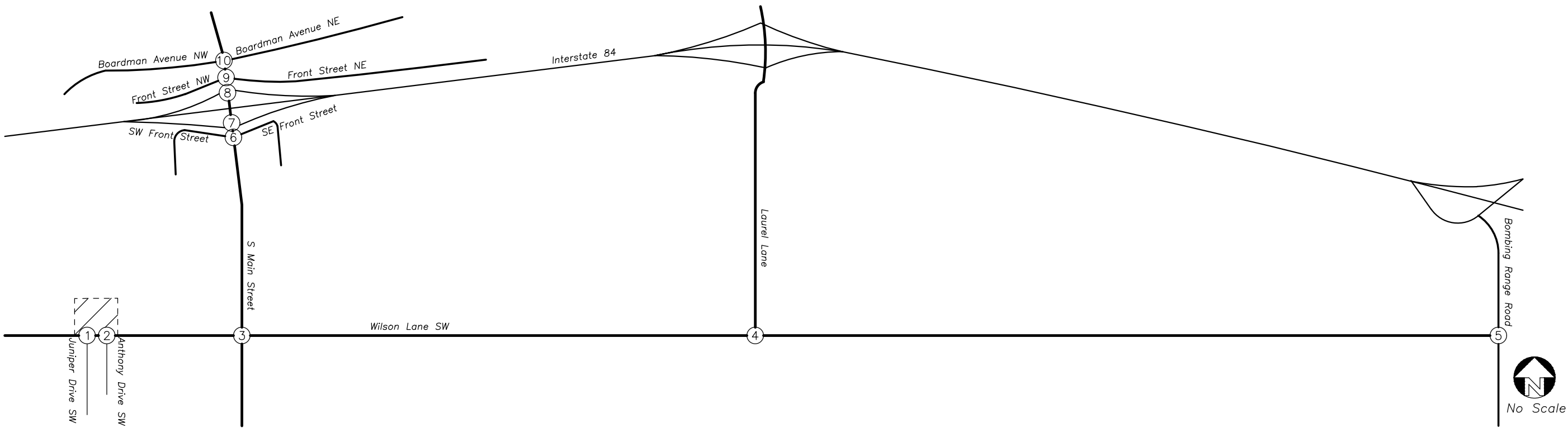


AM PEAK HOUR

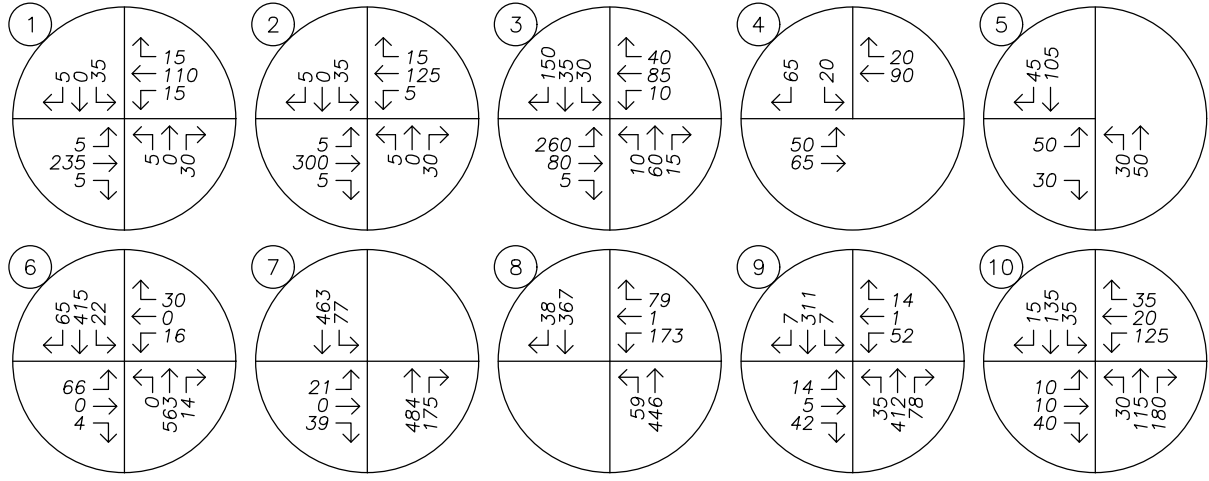


PM PEAK HOUR

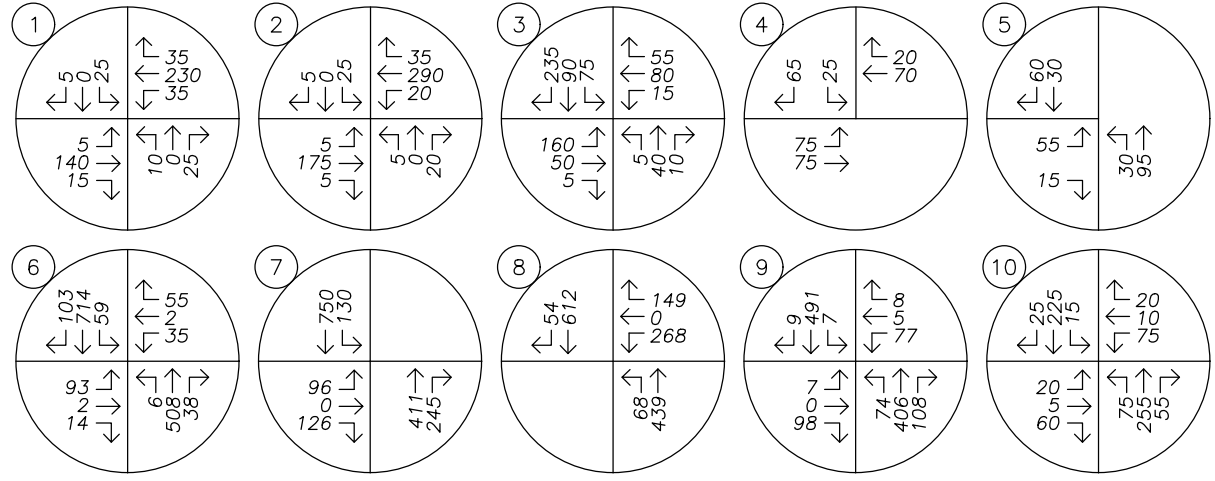




AM PEAK HOUR



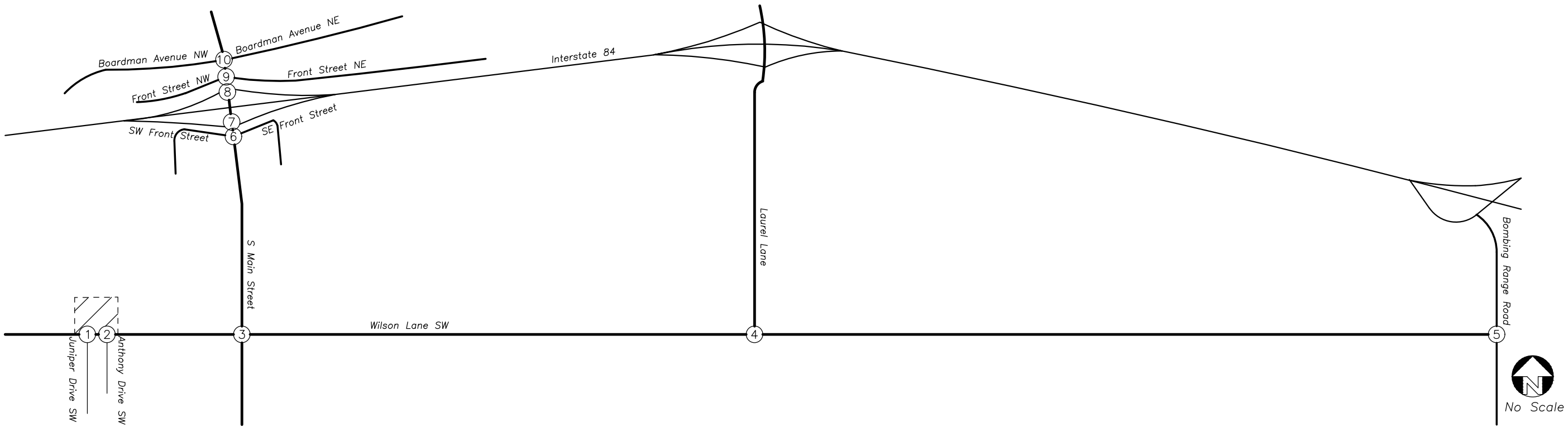
PM PEAK HOUR



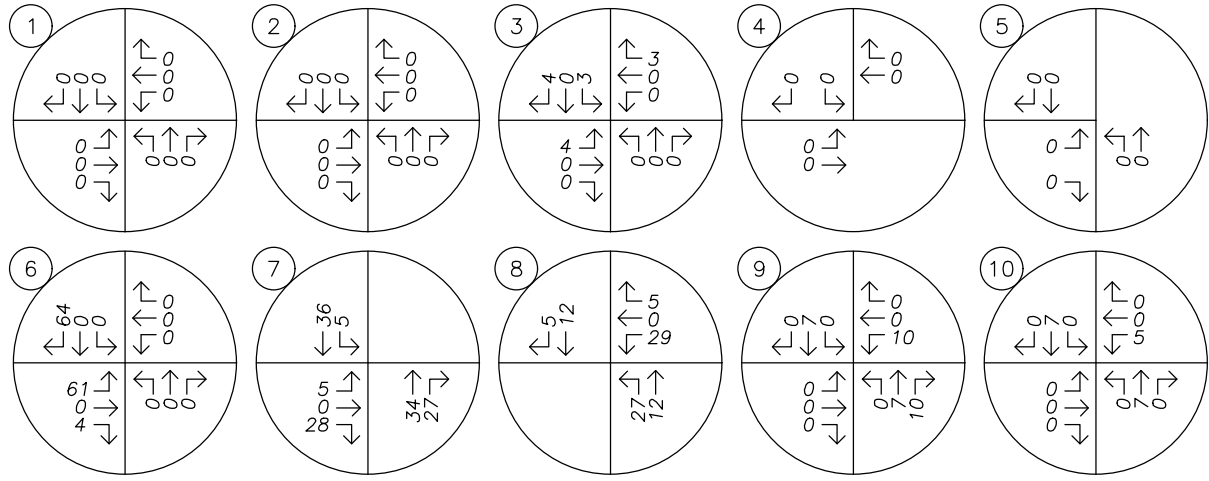
**TRAFFIC VOLUMES**

Year 2033 Future Conditions  
AM & PM Peak Hours

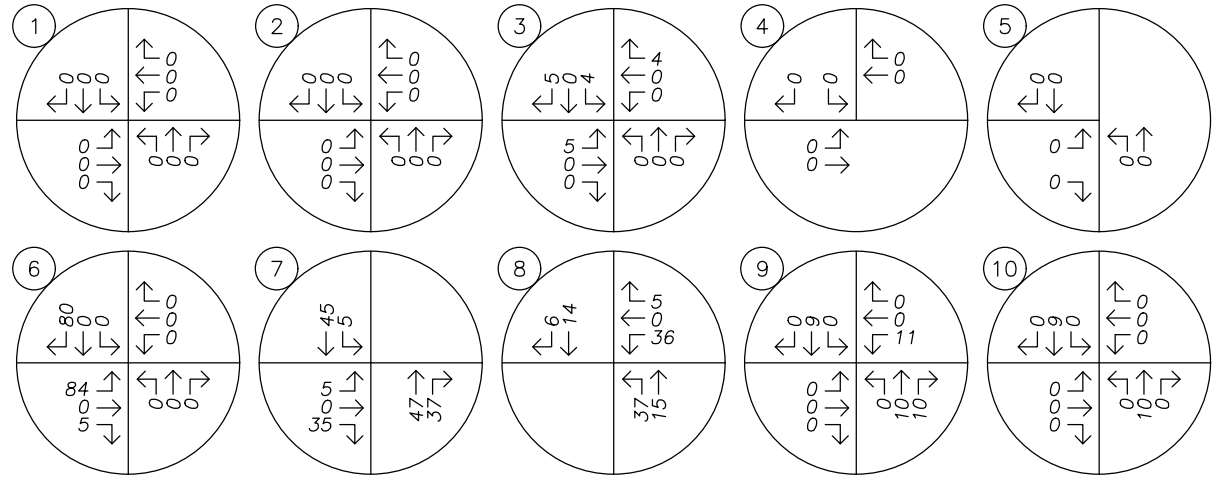
Figure 7



AM PEAK HOUR



PM PEAK HOUR



| Intersection             |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.1    |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 4      | 0                                                                                 | 0      | 14    | 0                                                                                 | 26                                                                                | 0                                                                                 | 456                                                                               | 12   | 19                                                                                  | 352                                                                                 | 1    |
| Future Vol, veh/h        | 4      | 0                                                                                 | 0      | 14    | 0                                                                                 | 26                                                                                | 0                                                                                 | 456                                                                               | 12   | 19                                                                                  | 352                                                                                 | 1    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 81     | 81                                                                                | 81     | 81    | 81                                                                                | 81                                                                                | 81                                                                                | 81                                                                                | 81   | 81                                                                                  | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0     | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 5      | 0                                                                                 | 0      | 17    | 0                                                                                 | 32                                                                                | 0                                                                                 | 563                                                                               | 15   | 23                                                                                  | 435                                                                                 | 1    |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1046   | 1061                                                                              | 436    | 1052  | 1054                                                                              | 570                                                                               | 437                                                                               | 0                                                                                 | 0    | 578                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 483    | 483                                                                               | -      | 570   | 570                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 563    | 578                                                                               | -      | 481   | 484                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1   | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5   | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 201    | 218                                                                               | 608    | 206   | 228                                                                               | 525                                                                               | 1112                                                                              | -                                                                                 | -    | 981                                                                                 | -                                                                                   | -    |
| Stage 1                  | 554    | 543                                                                               | -      | 510   | 508                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 500    | 492                                                                               | -      | 570   | 556                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 184    | 213                                                                               | 607    | 201   | 222                                                                               | 525                                                                               | 1111                                                                              | -                                                                                 | -    | 981                                                                                 | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 184    | 213                                                                               | -      | 201   | 222                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 540    | 529                                                                               | -      | 510   | 508                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 470    | 492                                                                               | -      | 556   | 542                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 25.09  |                                                                                   | 16.59  |       | 0                                                                                 |                                                                                   | 0.45                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | D      |                                                                                   | C      |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | WBLn2                                                                             | SBL                                                                               | SBT                                                                               | SBR  |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 1111   | -                                                                                 | -      | 184   | 201                                                                               | 525                                                                               | 981                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -      | 0.027 | 0.086                                                                             | 0.061                                                                             | 0.024                                                                             | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 0      | -                                                                                 | -      | 25.1  | 24.5                                                                              | 12.3                                                                              | 8.8                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | D     | C                                                                                 | B                                                                                 | A                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 0.1   | 0.3                                                                               | 0.2                                                                               | 0.1                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 1.7

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 14   | 0                                                                                 | 8                                                                                 | 0    | 0    | 0    | 0    | 372                                                                               | 114  | 63   | 364                                                                                 | 0    |
| Future Vol, veh/h        | 14   | 0                                                                                 | 8                                                                                 | 0    | 0    | 0    | 0    | 372                                                                               | 114  | 63   | 364                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 81   | 81                                                                                | 81                                                                                | 81   | 81   | 81   | 81   | 81                                                                                | 81   | 81   | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 17   | 0                                                                                 | 10                                                                                | 0    | 0    | 0    | 0    | 459                                                                               | 141  | 78   | 449                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 605    | 606   | 449    | - | - | - | 1      | 0 | - |
| Stage 1              | 605    | 605   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 390    | 393   | 581    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 461    | 466   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 365    | 368   | 581    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 365    | 368   | -      | - | - | - | -      | - | - |
| Stage 1              | 432    | 436   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 13.88 |    | 1.09 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 365   | 581   | 266   | -   |
| HCM Lane V/C Ratio    | 0.047 | 0.017 | 0.049 | -   |
| HCM Ctrl Dly (s/v)    | 15.4  | 11.3  | 7.4   | 0   |
| HCM Lane LOS          | C     | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | 0.1   | 0.2   | -   |



Intersection

Int Delay, s/veh 6.7

| Movement                 | EBL   | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |       |       | ↗     |      | ↖    | ↗    |      | ↖    |      |      | ↗    |      |
| Traffic Vol, veh/h       | 0     | 0     | 0     | 121  | 1    | 65   | 22   | 364  | 0    | 0    | 306  | 29   |
| Future Vol, veh/h        | 0     | 0     | 0     | 121  | 1    | 65   | 22   | 364  | 0    | 0    | 306  | 29   |
| Conflicting Peds, #/hr   | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Yield | Yield | Yield | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -     | Yield | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -     | -     | 0     | -    | -    | 25   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -     | 0     | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0     | -     | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 78    | 78    | 78    | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   |
| Heavy Vehicles, %        | 0     | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 0     | 0     | 0     | 155  | 1    | 83   | 28   | 467  | 0    | 0    | 392  | 37   |

| Major/Minor          | Minor1 | Major1 | Major2 |      |   |   |   |   |   |   |  |
|----------------------|--------|--------|--------|------|---|---|---|---|---|---|--|
| Conflicting Flow All | 915    | 953    | 467    | 429  | 0 | - | - | - | - | 0 |  |
| Stage 1              | 523    | 523    | -      | -    | - | - | - | - | - | - |  |
| Stage 2              | 392    | 429    | -      | -    | - | - | - | - | - | - |  |
| Critical Hdwy        | 7.1    | 6.5    | 6.2    | 4.1  | - | - | - | - | - | - |  |
| Critical Hdwy Stg 1  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |  |
| Critical Hdwy Stg 2  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |  |
| Follow-up Hdwy       | 3.5    | 4      | 3.3    | 2.2  | - | - | - | - | - | - |  |
| Pot Cap-1 Maneuver   | 255    | 261    | 600    | 1141 | - | 0 | 0 | - | - | - |  |
| Stage 1              | 541    | 534    | -      | -    | - | 0 | 0 | - | - | - |  |
| Stage 2              | 636    | 587    | -      | -    | - | 0 | 0 | - | - | - |  |
| Platoon blocked, %   |        |        |        |      | - |   |   | - |   | - |  |
| Mov Cap-1 Maneuver   | 247    | 253    | 600    | 1141 | - | - | - | - | - | - |  |
| Mov Cap-2 Maneuver   | 247    | 253    | -      | -    | - | - | - | - | - | - |  |
| Stage 1              | 523    | 516    | -      | -    | - | - | - | - | - | - |  |
| Stage 2              | 636    | 587    | -      | -    | - | - | - | - | - | - |  |

| Approach          | WB    | NB   | SB |
|-------------------|-------|------|----|
| HCM Ctrl Dly, s/v | 31.42 | 0.47 | 0  |
| HCM LOS           | D     |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT | SBR |
|-----------------------|-------|---------------|-----|-----|
| Capacity (veh/h)      | 103   | - 247 600     | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | - 0.633 0.139 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.2   | 0 41.8 12     | -   | -   |
| HCM Lane LOS          | A     | A E B         | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | - 3.9 0.5     | -   | -   |

| Intersection             |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.8    |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR                                                                               | WBL   | WBT                                                                               | WBR   | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |  |       |  |       |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 12     | 4                                                                                 | 37                                                                                | 37    | 1                                                                                 | 12    | 31                                                                                | 338                                                                               | 60   | 6                                                                                   | 261                                                                                 | 6    |
| Future Vol, veh/h        | 12     | 4                                                                                 | 37                                                                                | 37    | 1                                                                                 | 12    | 31                                                                                | 338                                                                               | 60   | 6                                                                                   | 261                                                                                 | 6    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0     | 0                                                                                 | 0     | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop   | Stop                                                                              | Stop                                                                              | Stop  | Stop                                                                              | Stop  | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None                                                                              | -     | -                                                                                 | None  | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | 100                                                                               | -     | -                                                                                 | -     | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | -     | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | -     | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 75     | 75                                                                                | 75                                                                                | 75    | 75                                                                                | 75    | 75                                                                                | 75                                                                                | 75   | 75                                                                                  | 75                                                                                  | 75   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0                                                                                 | 0     | 0                                                                                 | 0     | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Mvmt Flow                | 16     | 5                                                                                 | 49                                                                                | 49    | 1                                                                                 | 16    | 41                                                                                | 451                                                                               | 80   | 8                                                                                   | 348                                                                                 | 8    |
|                          |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1                                                                            |       | Major1                                                                            |       | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 902    | 981                                                                               | 352                                                                               | 940   | 945                                                                               | 491   | 356                                                                               | 0                                                                                 | 0    | 531                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 368    | 368                                                                               | -                                                                                 | 573   | 573                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 534    | 613                                                                               | -                                                                                 | 367   | 372                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.1    | 6.5                                                                               | 6.2                                                                               | 7.1   | 6.5                                                                               | 6.2   | 4.1                                                                               | -                                                                                 | -    | 4.1                                                                                 | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.1    | 5.5                                                                               | -                                                                                 | 6.1   | 5.5                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.1    | 5.5                                                                               | -                                                                                 | 6.1   | 5.5                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.5    | 4                                                                                 | 3.3                                                                               | 3.5   | 4                                                                                 | 3.3   | 2.2                                                                               | -                                                                                 | -    | 2.2                                                                                 | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 261    | 251                                                                               | 696                                                                               | 246   | 264                                                                               | 582   | 1214                                                                              | -                                                                                 | -    | 1047                                                                                | -                                                                                   | -    |
| Stage 1                  | 656    | 625                                                                               | -                                                                                 | 508   | 507                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 534    | 486                                                                               | -                                                                                 | 657   | 622                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 242    | 241                                                                               | 696                                                                               | 214   | 253                                                                               | 582   | 1214                                                                              | -                                                                                 | -    | 1047                                                                                | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 242    | 241                                                                               | -                                                                                 | 214   | 253                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 651    | 620                                                                               | -                                                                                 | 491   | 490                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 500    | 470                                                                               | -                                                                                 | 601   | 618                                                                               | -     | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB                                                                                |       | NB                                                                                |       | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 13.82  |                                                                                   | 24.2                                                                              |       | 0.58                                                                              |       | 0.19                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | B      |                                                                                   | C                                                                                 |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |                                                                                   |       |                                                                                   |       |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR                                                                               | EBLn1 | EBLn2                                                                             | WBLn1 | SBL                                                                               | SBT                                                                               | SBR  |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 1214   | -                                                                                 | -                                                                                 | 242   | 696                                                                               | 253   | 1047                                                                              | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.034  | -                                                                                 | -                                                                                 | 0.088 | 0.071                                                                             | 0.263 | 0.008                                                                             | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 8.1    | -                                                                                 | -                                                                                 | 21.3  | 10.6                                                                              | 24.2  | 8.5                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -                                                                                 | C     | B                                                                                 | C     | A                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.1    | -                                                                                 | -                                                                                 | 0.3   | 0.2                                                                               | 1     | 0                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |

| Intersection             |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.3    |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 8      | 2                                                                                 | 8      | 31    | 2                                                                                 | 48                                                                                | 5                                                                                 | 419                                                                               | 33   | 52                                                                                  | 586                                                                                 | 20   |
| Future Vol, veh/h        | 8      | 2                                                                                 | 8      | 31    | 2                                                                                 | 48                                                                                | 5                                                                                 | 419                                                                               | 33   | 52                                                                                  | 586                                                                                 | 20   |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 93     | 93                                                                                | 93     | 93    | 93                                                                                | 93                                                                                | 93                                                                                | 93                                                                                | 93   | 93                                                                                  | 93                                                                                  | 93   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0     | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 9      | 2                                                                                 | 9      | 33    | 2                                                                                 | 52                                                                                | 5                                                                                 | 451                                                                               | 35   | 56                                                                                  | 630                                                                                 | 22   |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1216   | 1250                                                                              | 642    | 1222  | 1243                                                                              | 468                                                                               | 653                                                                               | 0                                                                                 | 0    | 486                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 754    | 754                                                                               | -      | 479   | 479                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 462    | 497                                                                               | -      | 743   | 764                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1   | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5   | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 153    | 168                                                                               | 464    | 158   | 176                                                                               | 599                                                                               | 925                                                                               | -                                                                                 | -    | 1061                                                                                | -                                                                                   | -    |
| Stage 1                  | 392    | 408                                                                               | -      | 571   | 558                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 568    | 535                                                                               | -      | 410   | 415                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 130    | 158                                                                               | 463    | 144   | 165                                                                               | 599                                                                               | 924                                                                               | -                                                                                 | -    | 1061                                                                                | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 130    | 158                                                                               | -      | 144   | 165                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 371    | 387                                                                               | -      | 568   | 555                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 514    | 532                                                                               | -      | 379   | 393                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 25.24  |                                                                                   | 22.19  |       | 0.1                                                                               |                                                                                   | 0.68                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | D      |                                                                                   | C      |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | WBLn2                                                                             | SBL                                                                               | SBT                                                                               | SBR  |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 924    | -                                                                                 | -      | 197   | 145                                                                               | 599                                                                               | 1061                                                                              | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.006  | -                                                                                 | -      | 0.098 | 0.244                                                                             | 0.086                                                                             | 0.053                                                                             | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 8.9    | -                                                                                 | -      | 25.2  | 37.6                                                                              | 11.6                                                                              | 8.6                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | D     | E                                                                                 | B                                                                                 | A                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 0.3   | 0.9                                                                               | 0.3                                                                               | 0.2                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 4.9

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 80   | 0                                                                                 | 74                                                                                | 0    | 0    | 0    | 0    | 304                                                                               | 171  | 110  | 584                                                                                 | 0    |
| Future Vol, veh/h        | 80   | 0                                                                                 | 74                                                                                | 0    | 0    | 0    | 0    | 304                                                                               | 171  | 110  | 584                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94   | 94   | 94                                                                                | 94   | 94   | 94                                                                                  | 94   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 85   | 0                                                                                 | 79                                                                                | 0    | 0    | 0    | 0    | 323                                                                               | 182  | 117  | 621                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |       |   |
|----------------------|--------|-------|--------|---|---|---|--------|-------|---|
| Conflicting Flow All | 855    | 856   | 621    | - | - | - |        | 1     | 0 |
| Stage 1              | 855    | 855   | -      | - | - | - |        | -     | - |
| Stage 2              | 0      | 1     | -      | - | - | - |        | -     | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - |        | 4.15  | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - |        | -     | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - |        | -     | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - |        | 2.245 | - |
| Pot Cap-1 Maneuver   | 263    | 280   | 463    | 0 | 0 | 0 |        | 1602  | - |
| Stage 1              | 334    | 356   | -      | 0 | 0 | 0 |        | -     | - |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 |        | -     | - |
| Platoon blocked, %   |        |       |        |   |   |   |        |       | - |
| Mov Cap-1 Maneuver   | 234    | 249   | 463    | - | - | - |        | 1602  | - |
| Mov Cap-2 Maneuver   | 234    | 249   | -      | - | - | - |        | -     | - |
| Stage 1              | 296    | 316   | -      | - | - | - |        | -     | - |
| Stage 2              | -      | -     | -      | - | - | - |        | -     | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 21.95 |    | 1.18 |
| HCM LOS           | C     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 234   | 463   | 285   | -   |
| HCM Lane V/C Ratio    | 0.364 | 0.17  | 0.073 | -   |
| HCM Ctrl Dly (s/v)    | 29    | 14.4  | 7.4   | 0   |
| HCM Lane LOS          | D     | B     | A     | A   |
| HCM 95th %tile Q(veh) | 1.6   | 0.6   | 0.2   | -   |

**Intersection**

Int Delay, s/veh 16.2

| Movement                 | EBL   | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |       |       | ↗     |      | ↖    | ↗    |      | ↖    |      |      | ↖    |      |
| Traffic Vol, veh/h       | 0     | 0     | 0     | 186  | 0    | 126  | 23   | 361  | 0    | 0    | 508  | 42   |
| Future Vol, veh/h        | 0     | 0     | 0     | 186  | 0    | 126  | 23   | 361  | 0    | 0    | 508  | 42   |
| Conflicting Peds, #/hr   | 0     | 0     | 1     | 1    | 0    | 0    | 4    | 0    | 0    | 0    | 0    | 4    |
| Sign Control             | Yield | Yield | Yield | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -     | Yield | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -     | -     | 0     | -    | -    | 25   | -    | -    | -    | -    | -    | -    |
| 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, %        | 0     | 0     | 0     | 7    | 7    | 7    | 18   | 18   | 18   | 17   | 17   | 17   |
| Mvmt Flow                | 0     | 0     | 0     | 202  | 0    | 137  | 25   | 392  | 0    | 0    | 552  | 46   |

| Major/Minor          | Minor1 |       | Major1 |       | Major2 |   |   |
|----------------------|--------|-------|--------|-------|--------|---|---|
| Conflicting Flow All | 996    | 1044  | 392    | 602   | 0      | - | - |
| Stage 1              | 442    | 442   | -      | -     | -      | - | - |
| Stage 2              | 553    | 602   | -      | -     | -      | - | - |
| Critical Hdwy        | 7.17   | 6.57  | 6.27   | 4.28  | -      | - | - |
| Critical Hdwy Stg 1  | 6.17   | 5.57  | -      | -     | -      | - | - |
| Critical Hdwy Stg 2  | 6.17   | 5.57  | -      | -     | -      | - | - |
| Follow-up Hdwy       | 3.563  | 4.063 | 3.363  | 2.362 | -      | - | - |
| Pot Cap-1 Maneuver   | 219    | 224   | 646    | 902   | -      | 0 | 0 |
| Stage 1              | 585    | 568   | -      | -     | -      | 0 | 0 |
| Stage 2              | 508    | 481   | -      | -     | -      | 0 | 0 |
| Platoon blocked, %   |        |       |        |       | -      |   | - |
| Mov Cap-1 Maneuver   | 211    | 216   | 646    | 902   | -      | - | - |
| Mov Cap-2 Maneuver   | 211    | 216   | -      | -     | -      | - | - |
| Stage 1              | 564    | 548   | -      | -     | -      | - | - |
| Stage 2              | 508    | 481   | -      | -     | -      | - | - |

| Approach          | WB    | NB   | SB |
|-------------------|-------|------|----|
| HCM Ctrl Dly, s/v | 64.05 | 0.55 | 0  |
| HCM LOS           | F     |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT | SBR |
|-----------------------|-------|---------------|-----|-----|
| Capacity (veh/h)      | 108   | - 211 646     | -   | -   |
| HCM Lane V/C Ratio    | 0.028 | - 0.959 0.212 | -   | -   |
| HCM Ctrl Dly (s/v)    | 9.1   | 0 99.3 12.1   | -   | -   |
| HCM Lane LOS          | A     | A F B         | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | - 8.2 0.8     | -   | -   |

Intersection

Int Delay, s/veh 4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 6    | 0                                                                                 | 86                                                                                | 58   | 4                                                                                 | 7    | 65                                                                                | 336                                                                               | 86   | 6                                                                                   | 406                                                                                 | 8    |
| Future Vol, veh/h        | 6    | 0                                                                                 | 86                                                                                | 58   | 4                                                                                 | 7    | 65                                                                                | 336                                                                               | 86   | 6                                                                                   | 406                                                                                 | 8    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| 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, %        | 3    | 3                                                                                 | 3                                                                                 | 0    | 0                                                                                 | 0    | 7                                                                                 | 7                                                                                 | 7    | 6                                                                                   | 6                                                                                   | 6    |
| Mvmt Flow                | 7    | 0                                                                                 | 93                                                                                | 63   | 4                                                                                 | 8    | 71                                                                                | 365                                                                               | 93   | 7                                                                                   | 441                                                                                 | 9    |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   | Major2 |       | Major2 |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|--------|-------|--------|---|
| Conflicting Flow All | 967    | 1059  | 446    | 1008 | 1016   | 412 | 450    | 0 | 0      | 459   | 0      | 0 |
| Stage 1              | 459    | 459   | -      | 553  | 553    | -   | -      | - | -      | -     | -      | - |
| Stage 2              | 509    | 600   | -      | 454  | 463    | -   | -      | - | -      | -     | -      | - |
| Critical Hdwy        | 7.13   | 6.53  | 6.23   | 7.1  | 6.5    | 6.2 | 4.17   | - | -      | 4.16  | -      | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | -      | -     | -      | - |
| Critical Hdwy Stg 2  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | -      | -     | -      | - |
| Follow-up Hdwy       | 3.527  | 4.027 | 3.327  | 3.5  | 4      | 3.3 | 2.263  | - | -      | 2.254 | -      | - |
| Pot Cap-1 Maneuver   | 233    | 224   | 610    | 221  | 240    | 644 | 1084   | - | -      | 1081  | -      | - |
| Stage 1              | 580    | 565   | -      | 521  | 517    | -   | -      | - | -      | -     | -      | - |
| Stage 2              | 545    | 488   | -      | 589  | 567    | -   | -      | - | -      | -     | -      | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | -      |       | -      | - |
| Mov Cap-1 Maneuver   | 210    | 208   | 610    | 174  | 223    | 644 | 1084   | - | -      | 1081  | -      | - |
| Mov Cap-2 Maneuver   | 210    | 208   | -      | 174  | 223    | -   | -      | - | -      | -     | -      | - |
| Stage 1              | 577    | 562   | -      | 487  | 484    | -   | -      | - | -      | -     | -      | - |
| Stage 2              | 499    | 456   | -      | 496  | 564    | -   | -      | - | -      | -     | -      | - |

| Approach          | EB    | WB    | NB   | SB   |
|-------------------|-------|-------|------|------|
| HCM Ctrl Dly, s/v | 12.66 | 35.65 | 1.14 | 0.12 |
| HCM LOS           | B     | E     |      |      |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1084  | -   | -   | 210   | 610   | 191   | 1081  | -   | -   |
| HCM Lane V/C Ratio    | 0.065 | -   | -   | 0.031 | 0.153 | 0.394 | 0.006 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.6   | -   | -   | 22.7  | 12    | 35.6  | 8.3   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | E     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.1   | 0.5   | 1.7   | 0     | -   | -   |

| Intersection             |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 4      |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |                   |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 65     | 0                                                                                 | 4      | 15                | 0                                                                                 | 27                                                                                | 0                                                                                 | 475                                                                               | 12   | 20                                                                                  | 366                                                                                 | 65   |
| Future Vol, veh/h        | 65     | 0                                                                                 | 4      | 15                | 0                                                                                 | 27                                                                                | 0                                                                                 | 475                                                                               | 12   | 20                                                                                  | 366                                                                                 | 65   |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0                 | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop              | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -                 | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 81     | 81                                                                                | 81     | 81                | 81                                                                                | 81                                                                                | 81                                                                                | 81                                                                                | 81   | 81                                                                                  | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0                 | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 80     | 0                                                                                 | 5      | 19                | 0                                                                                 | 33                                                                                | 0                                                                                 | 586                                                                               | 15   | 25                                                                                  | 452                                                                                 | 80   |
|                          |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |                   | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1129   | 1144                                                                              | 493    | 1095              | 1176                                                                              | 594                                                                               | 533                                                                               | 0                                                                                 | 0    | 601                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 542    | 542                                                                               | -      | 594               | 594                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 586    | 601                                                                               | -      | 501               | 582                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1               | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1               | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1               | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5               | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 176    | 195                                                                               | 564    | 193               | 193                                                                               | 509                                                                               | 1024                                                                              | -                                                                                 | -    | 962                                                                                 | -                                                                                   | -    |
| Stage 1                  | 514    | 510                                                                               | -      | 495               | 496                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 486    | 480                                                                               | -      | 556               | 502                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 160    | 190                                                                               | 564    | 186               | 188                                                                               | 509                                                                               | 1023                                                                              | -                                                                                 | -    | 962                                                                                 | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 160    | 190                                                                               | -      | 186               | 188                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 500    | 497                                                                               | -      | 495               | 496                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 454    | 480                                                                               | -      | 537               | 489                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |                   | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 46.92  |                                                                                   | 17.53  |                   | 0                                                                                 |                                                                                   | 0.39                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | E      |                                                                                   | C      |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1WBLn1WBLn2   | SBL                                                                               | SBT                                                                               | SBR                                                                               |                                                                                   |      |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 1023   | -                                                                                 | -      | 167 186 509       | 962                                                                               | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -      | 0.509 0.099 0.066 | 0.026                                                                             | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 0      | -                                                                                 | -      | 46.9 26.5 12.6    | 8.8                                                                               | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | E D B             | A                                                                                 | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 2.5 0.3 0.2       | 0.1                                                                               | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 2.4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 20   | 0                                                                                 | 36                                                                                | 0    | 0    | 0    | 0    | 421                                                                               | 146  | 71   | 415                                                                                 | 0    |
| Future Vol, veh/h        | 20   | 0                                                                                 | 36                                                                                | 0    | 0    | 0    | 0    | 421                                                                               | 146  | 71   | 415                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 81   | 81                                                                                | 81                                                                                | 81   | 81   | 81   | 81   | 81                                                                                | 81   | 81   | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 25   | 0                                                                                 | 44                                                                                | 0    | 0    | 0    | 0    | 520                                                                               | 180  | 88   | 512                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 688    | 689   | 512    | - | - | - | 1      | 0 | - |
| Stage 1              | 688    | 688   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 343    | 352   | 535    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 415    | 427   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 316    | 325   | 535    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 316    | 325   | -      | - | - | - | -      | - | - |
| Stage 1              | 383    | 394   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 14.12 |    | 1.08 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 316   | 535   | 263   | -   |
| HCM Lane V/C Ratio    | 0.078 | 0.083 | 0.055 | -   |
| HCM Ctrl Dly (s/v)    | 17.3  | 12.3  | 7.4   | 0   |
| HCM Lane LOS          | C     | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0.3   | 0.3   | 0.2   | -   |



**Intersection**

Int Delay, s/veh 21.3

| Movement                 | EBL   | EBT   | EBR                                                                               | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|-------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |       |       |  |      |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 0     | 0     | 0                                                                                 | 155  | 1                                                                                 | 73                                                                                | 50   | 391                                                                               | 0    | 0    | 331                                                                                 | 35   |
| Future Vol, veh/h        | 0     | 0     | 0                                                                                 | 155  | 1                                                                                 | 73                                                                                | 50   | 391                                                                               | 0    | 0    | 331                                                                                 | 35   |
| Conflicting Peds, #/hr   | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Yield | Yield | Yield                                                                             | Stop | Stop                                                                              | Stop                                                                              | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -     | -     | Yield                                                                             | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -     | -     | 0                                                                                 | -    | -                                                                                 | 25                                                                                | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 78    | 78    | 78                                                                                | 78   | 78                                                                                | 78                                                                                | 78   | 78                                                                                | 78   | 78   | 78                                                                                  | 78   |
| Heavy Vehicles, %        | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Mvmt Flow                | 0     | 0     | 0                                                                                 | 199  | 1                                                                                 | 94                                                                                | 64   | 501                                                                               | 0    | 0    | 424                                                                                 | 45   |

| Major/Minor          | Minor1 | Major1 | Major2 |      |   |   |   |   |   |   |
|----------------------|--------|--------|--------|------|---|---|---|---|---|---|
| Conflicting Flow All | 1054   | 1099   | 501    | 469  | 0 | - | - | - | - | 0 |
| Stage 1              | 629    | 629    | -      | -    | - | - | - | - | - | - |
| Stage 2              | 424    | 469    | -      | -    | - | - | - | - | - | - |
| Critical Hdwy        | 7.1    | 6.5    | 6.2    | 4.1  | - | - | - | - | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |
| Follow-up Hdwy       | 3.5    | 4      | 3.3    | 2.2  | - | - | - | - | - | - |
| Pot Cap-1 Maneuver   | 206    | 214    | 574    | 1103 | - | 0 | 0 | - | - | - |
| Stage 1              | 473    | 478    | -      | -    | - | 0 | 0 | - | - | - |
| Stage 2              | 612    | 564    | -      | -    | - | 0 | 0 | - | - | - |
| Platoon blocked, %   |        |        |        |      | - |   |   | - | - |   |
| Mov Cap-1 Maneuver   | ~ 189  | 197    | 574    | 1103 | - | - | - | - | - | - |
| Mov Cap-2 Maneuver   | ~ 189  | 197    | -      | -    | - | - | - | - | - | - |
| Stage 1              | 435    | 440    | -      | -    | - | - | - | - | - | - |
| Stage 2              | 612    | 564    | -      | -    | - | - | - | - | - | - |

| Approach          | WB    | NB   | SB |
|-------------------|-------|------|----|
| HCM Ctrl Dly, s/v | 94.52 | 0.96 | 0  |
| HCM LOS           | F     |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT   | SBR |
|-----------------------|-------|---------------|-------|-----|
| Capacity (veh/h)      | 204   | - 189         | 574   | - - |
| HCM Lane V/C Ratio    | 0.058 | - 1.057       | 0.163 | - - |
| HCM Ctrl Dly (s/v)    | 8.5   | 0 132.9       | 12.5  | - - |
| HCM Lane LOS          | A     | A F           | B     | - - |
| HCM 95th %tile Q(veh) | 0.2   | - 9.4         | 0.6   | - - |

**Notes**

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

**Intersection**

Int Delay, s/veh 3.4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 12   | 4                                                                                 | 38                                                                                | 48   | 1                                                                                 | 12   | 32                                                                                | 360                                                                               | 72   | 6                                                                                   | 280                                                                                 | 6    |
| Future Vol, veh/h        | 12   | 4                                                                                 | 38                                                                                | 48   | 1                                                                                 | 12   | 32                                                                                | 360                                                                               | 72   | 6                                                                                   | 280                                                                                 | 6    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                  | 75                                                                                  | 75   |
| Heavy Vehicles, %        | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Mvmt Flow                | 16   | 5                                                                                 | 51                                                                                | 64   | 1                                                                                 | 16   | 43                                                                                | 480                                                                               | 96   | 8                                                                                   | 373                                                                                 | 8    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |     | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|-----|--------|---|---|------|---|---|
| Conflicting Flow All | 959    | 1055 | 377    | 1005 | 1011   | 528 | 381    | 0 | 0 | 576  | 0 | 0 |
| Stage 1              | 393    | 393  | -      | 613  | 613    | -   | -      | - | - | -    | - | - |
| Stage 2              | 566    | 661  | -      | 392  | 397    | -   | -      | - | - | -    | - | - |
| Critical Hdwy        | 7.1    | 6.5  | 6.2    | 7.1  | 6.5    | 6.2 | 4.1    | - | - | 4.1  | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.5    | 4    | 3.3    | 3.5  | 4      | 3.3 | 2.2    | - | - | 2.2  | - | - |
| Pot Cap-1 Maneuver   | 238    | 228  | 674    | 222  | 242    | 554 | 1188   | - | - | 1007 | - | - |
| Stage 1              | 636    | 609  | -      | 483  | 486    | -   | -      | - | - | -    | - | - |
| Stage 2              | 513    | 463  | -      | 637  | 607    | -   | -      | - | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |        |     |        | - | - |      | - | - |
| Mov Cap-1 Maneuver   | 220    | 218  | 674    | 192  | 231    | 554 | 1188   | - | - | 1007 | - | - |
| Mov Cap-2 Maneuver   | 220    | 218  | -      | 192  | 231    | -   | -      | - | - | -    | - | - |
| Stage 1              | 631    | 604  | -      | 466  | 469    | -   | -      | - | - | -    | - | - |
| Stage 2              | 479    | 446  | -      | 579  | 602    | -   | -      | - | - | -    | - | - |

| Approach          | EB    |  | WB    |  | NB   |  | SB   |  |
|-------------------|-------|--|-------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 14.44 |  | 30.53 |  | 0.56 |  | 0.18 |  |
| HCM LOS           | B     |  | D     |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1188  | -   | -   | 220   | 674   | 221   | 1007  | -   | -   |
| HCM Lane V/C Ratio    | 0.036 | -   | -   | 0.097 | 0.075 | 0.368 | 0.008 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.1   | -   | -   | 23.1  | 10.8  | 30.5  | 8.6   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | D     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3   | 0.2   | 1.6   | 0     | -   | -   |

| Intersection             |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 11.7   |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 92     | 2                                                                                 | 13     | 32    | 2                                                                                 | 50                                                                                | 5                                                                                 | 436                                                                               | 34   | 54                                                                                  | 609                                                                                 | 101  |
| Future Vol, veh/h        | 92     | 2                                                                                 | 13     | 32    | 2                                                                                 | 50                                                                                | 5                                                                                 | 436                                                                               | 34   | 54                                                                                  | 609                                                                                 | 101  |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 93     | 93                                                                                | 93     | 93    | 93                                                                                | 93                                                                                | 93                                                                                | 93                                                                                | 93   | 93                                                                                  | 93                                                                                  | 93   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0     | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 99     | 2                                                                                 | 14     | 34    | 2                                                                                 | 54                                                                                | 5                                                                                 | 469                                                                               | 37   | 58                                                                                  | 655                                                                                 | 109  |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1307   | 1342                                                                              | 710    | 1270  | 1378                                                                              | 487                                                                               | 764                                                                               | 0                                                                                 | 0    | 505                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 826    | 826                                                                               | -      | 498   | 498                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 481    | 516                                                                               | -      | 772   | 881                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1   | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5   | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 133    | 148                                                                               | 424    | 146   | 146                                                                               | 585                                                                               | 840                                                                               | -                                                                                 | -    | 1044                                                                                | -                                                                                   | -    |
| Stage 1                  | 358    | 378                                                                               | -      | 558   | 548                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 555    | 524                                                                               | -      | 395   | 367                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 111    | 139                                                                               | 423    | 131   | 137                                                                               | 585                                                                               | 839                                                                               | -                                                                                 | -    | 1044                                                                                | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 111    | 139                                                                               | -      | 131   | 137                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 337    | 357                                                                               | -      | 555   | 544                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 499    | 521                                                                               | -      | 359   | 347                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 132.33 |                                                                                   | 24.3   |       | 0.1                                                                               |                                                                                   | 0.61                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | F      |                                                                                   | C      |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | WBLn2                                                                             | SBL                                                                               | SBT                                                                               | SBR  |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 839    | -                                                                                 | -      | 123   | 131                                                                               | 585                                                                               | 1044                                                                              | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.006  | -                                                                                 | -      | 0.937 | 0.279                                                                             | 0.092                                                                             | 0.056                                                                             | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 9.3    | -                                                                                 | -      | 132.3 | 42.7                                                                              | 11.8                                                                              | 8.7                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | F     | E                                                                                 | B                                                                                 | A                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 6.1   | 1.1                                                                               | 0.3                                                                               | 0.2                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 6.3

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 88   | 0                                                                                 | 112                                                                               | 0    | 0    | 0    | 0    | 363                                                                               | 215  | 119  | 652                                                                                 | 0    |
| Future Vol, veh/h        | 88   | 0                                                                                 | 112                                                                               | 0    | 0    | 0    | 0    | 363                                                                               | 215  | 119  | 652                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94   | 94   | 94                                                                                | 94   | 94   | 94                                                                                  | 94   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 94   | 0                                                                                 | 119                                                                               | 0    | 0    | 0    | 0    | 386                                                                               | 229  | 127  | 694                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 947    | 948   | 694    | - | - | - | 1      | 0 | - |
| Stage 1              | 947    | 947   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 228    | 247   | 420    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 296    | 322   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 198    | 215   | 420    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 198    | 215   | -      | - | - | - | -      | - | - |
| Stage 1              | 258    | 281   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 26.38 |    | 1.15 |
| HCM LOS           | D     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 198   | 420   | 278   | -   |
| HCM Lane V/C Ratio    | 0.472 | 0.284 | 0.079 | -   |
| HCM Ctrl Dly (s/v)    | 38.4  | 16.9  | 7.4   | 0   |
| HCM Lane LOS          | E     | C     | A     | A   |
| HCM 95th %tile Q(veh) | 2.3   | 1.2   | 0.3   | -   |

**Intersection**

Int Delay, s/veh 59.1

| Movement                 | EBL   | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |       |       | ↗     |      | ↖    | ↗    |      | ↖    |      |      | ↖    |      |
| Traffic Vol, veh/h       | 0     | 0     | 0     | 229  | 0    | 136  | 61   | 390  | 0    | 0    | 542  | 50   |
| Future Vol, veh/h        | 0     | 0     | 0     | 229  | 0    | 136  | 61   | 390  | 0    | 0    | 542  | 50   |
| Conflicting Peds, #/hr   | 0     | 0     | 1     | 1    | 0    | 0    | 4    | 0    | 0    | 0    | 0    | 4    |
| Sign Control             | Yield | Yield | Yield | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -     | Yield | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -     | -     | 0     | -    | -    | 25   | -    | -    | -    | -    | -    | -    |
| 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, %        | 0     | 0     | 0     | 7    | 7    | 7    | 18   | 18   | 18   | 17   | 17   | 17   |
| Mvmt Flow                | 0     | 0     | 0     | 249  | 0    | 148  | 66   | 424  | 0    | 0    | 589  | 54   |

| Major/Minor          | Minor1 | Major1 | Major2 |       |   |   |   |   |   |   |  |
|----------------------|--------|--------|--------|-------|---|---|---|---|---|---|--|
| Conflicting Flow All | 1147   | 1204   | 424    | 647   | 0 | - | - | - | - | 0 |  |
| Stage 1              | 557    | 557    | -      | -     | - | - | - | - | - | - |  |
| Stage 2              | 590    | 647    | -      | -     | - | - | - | - | - | - |  |
| Critical Hdwy        | 7.17   | 6.57   | 6.27   | 4.28  | - | - | - | - | - | - |  |
| Critical Hdwy Stg 1  | 6.17   | 5.57   | -      | -     | - | - | - | - | - | - |  |
| Critical Hdwy Stg 2  | 6.17   | 5.57   | -      | -     | - | - | - | - | - | - |  |
| Follow-up Hdwy       | 3.563  | 4.063  | 3.363  | 2.362 | - | - | - | - | - | - |  |
| Pot Cap-1 Maneuver   | ~ 172  | 180    | 620    | 866   | - | 0 | 0 | - | - | - |  |
| Stage 1              | 506    | 504    | -      | -     | - | 0 | 0 | - | - | - |  |
| Stage 2              | 485    | 459    | -      | -     | - | 0 | 0 | - | - | - |  |
| Platoon blocked, %   |        |        |        |       | - |   |   | - | - | - |  |
| Mov Cap-1 Maneuver   | ~ 155  | 162    | 620    | 866   | - | - | - | - | - | - |  |
| Mov Cap-2 Maneuver   | ~ 155  | 162    | -      | -     | - | - | - | - | - | - |  |
| Stage 1              | 456    | 454    | -      | -     | - | - | - | - | - | - |  |
| Stage 2              | 485    | 459    | -      | -     | - | - | - | - | - | - |  |

| Approach          | WB     | NB   | SB |
|-------------------|--------|------|----|
| HCM Ctrl Dly, s/v | 226.48 | 1.28 | 0  |
| HCM LOS           | F      |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2  | SBT | SBR |
|-----------------------|-------|----------------|-----|-----|
| Capacity (veh/h)      | 243   | - 155 620      | -   | -   |
| HCM Lane V/C Ratio    | 0.077 | - 1.608 0.239  | -   | -   |
| HCM Ctrl Dly (s/v)    | 9.5   | 0\$ 353.5 12.6 | -   | -   |
| HCM Lane LOS          | A     | A F B          | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | - 17.2 0.9     | -   | -   |

**Notes**

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

| Intersection             |      |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 5.1  |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 6    | 0                                                                                 | 89                                                                                | 71   | 4                                                                                 | 7    | 68                                                                                | 359                                                                               | 99   | 6                                                                                   | 432                                                                                 | 8    |
| Future Vol, veh/h        | 6    | 0                                                                                 | 89                                                                                | 71   | 4                                                                                 | 7    | 68                                                                                | 359                                                                               | 99   | 6                                                                                   | 432                                                                                 | 8    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| 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, %        | 3    | 3                                                                                 | 3                                                                                 | 0    | 0                                                                                 | 0    | 7                                                                                 | 7                                                                                 | 7    | 6                                                                                   | 6                                                                                   | 6    |
| Mvmt Flow                | 7    | 0                                                                                 | 97                                                                                | 77   | 4                                                                                 | 8    | 74                                                                                | 390                                                                               | 108  | 7                                                                                   | 470                                                                                 | 9    |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|---|-------|---|---|
| Conflicting Flow All | 1027   | 1133  | 474    | 1074 | 1083   | 444 | 478    | 0 | 0 | 498   | 0 | 0 |
| Stage 1              | 487    | 487   | -      | 592  | 592    | -   | -      | - | - | -     | - | - |
| Stage 2              | 540    | 646   | -      | 483  | 491    | -   | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.13   | 6.53  | 6.23   | 7.1  | 6.5    | 6.2 | 4.17   | - | - | 4.16  | - | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.527  | 4.027 | 3.327  | 3.5  | 4      | 3.3 | 2.263  | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver   | 212    | 202   | 588    | 199  | 219    | 618 | 1058   | - | - | 1046  | - | - |
| Stage 1              | 560    | 549   | -      | 496  | 497    | -   | -      | - | - | -     | - | - |
| Stage 2              | 524    | 466   | -      | 569  | 551    | -   | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 189    | 187   | 588    | 154  | 202    | 618 | 1058   | - | - | 1046  | - | - |
| Mov Cap-2 Maneuver   | 189    | 187   | -      | 154  | 202    | -   | -      | - | - | -     | - | - |
| Stage 1              | 557    | 545   | -      | 462  | 462    | -   | -      | - | - | -     | - | - |
| Stage 2              | 477    | 433   | -      | 472  | 548    | -   | -      | - | - | -     | - | - |

| Approach          | EB   |  | WB    |  | NB   |  | SB   |  |
|-------------------|------|--|-------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 13.1 |  | 49.14 |  | 1.12 |  | 0.11 |  |
| HCM LOS           | B    |  | E     |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1058 | -   | -   | 189   | 588   | 166   | 1046  | -   | -   |
| HCM Lane V/C Ratio    | 0.07 | -   | -   | 0.034 | 0.164 | 0.535 | 0.006 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.7  | -   | -   | 24.7  | 12.3  | 49.1  | 8.5   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | C     | B     | E     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2  | -   | -   | 0.1   | 0.6   | 2.7   | 0     | -   | -   |

| Intersection             |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 4.5    |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL              | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |                  |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 65     | 0                                                                                 | 4      | 15               | 0                                                                                 | 27                                                                                | 0                                                                                 | 519                                                                               | 12   | 20                                                                                  | 380                                                                                 | 65   |
| Future Vol, veh/h        | 65     | 0                                                                                 | 4      | 15               | 0                                                                                 | 27                                                                                | 0                                                                                 | 519                                                                               | 12   | 20                                                                                  | 380                                                                                 | 65   |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0                | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -                | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -                | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -                | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -                | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 81     | 81                                                                                | 81     | 81               | 81                                                                                | 81                                                                                | 81                                                                                | 81                                                                                | 81   | 81                                                                                  | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0                | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 80     | 0                                                                                 | 5      | 19               | 0                                                                                 | 33                                                                                | 0                                                                                 | 641                                                                               | 15   | 25                                                                                  | 469                                                                                 | 80   |
|                          |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |                  | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1200   | 1215                                                                              | 510    | 1167             | 1248                                                                              | 648                                                                               | 550                                                                               | 0                                                                                 | 0    | 656                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 560    | 560                                                                               | -      | 648              | 648                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 641    | 656                                                                               | -      | 519              | 600                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1              | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1              | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1              | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5              | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 157    | 176                                                                               | 551    | 172              | 175                                                                               | 474                                                                               | 1009                                                                              | -                                                                                 | -    | 918                                                                                 | -                                                                                   | -    |
| Stage 1                  | 503    | 501                                                                               | -      | 462              | 469                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 453    | 453                                                                               | -      | 544              | 493                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 142    | 172                                                                               | 551    | 166              | 170                                                                               | 474                                                                               | 1008                                                                              | -                                                                                 | -    | 918                                                                                 | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 142    | 172                                                                               | -      | 166              | 170                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 489    | 487                                                                               | -      | 462              | 469                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 421    | 453                                                                               | -      | 525              | 479                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |                  | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 57.57  |                                                                                   | 18.96  |                  | 0                                                                                 |                                                                                   | 0.39                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | F      |                                                                                   | C      |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1WBLn1WBLn2  | SBL                                                                               | SBT                                                                               | SBR                                                                               |                                                                                   |      |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 1008   | -                                                                                 | -      | 149 166 474      | 918                                                                               | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -      | 0.573 0.111 0.07 | 0.027                                                                             | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 0      | -                                                                                 | -      | 57.6 29.4 13.2   | 9                                                                                 | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | F D B            | A                                                                                 | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 2.9 0.4 0.2      | 0.1                                                                               | -                                                                                 | -                                                                                 |                                                                                   |      |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 2.4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 20   | 0                                                                                 | 38                                                                                | 0    | 0    | 0    | 0    | 447                                                                               | 164  | 71   | 427                                                                                 | 0    |
| Future Vol, veh/h        | 20   | 0                                                                                 | 38                                                                                | 0    | 0    | 0    | 0    | 447                                                                               | 164  | 71   | 427                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 81   | 81                                                                                | 81                                                                                | 81   | 81   | 81   | 81   | 81                                                                                | 81   | 81   | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 25   | 0                                                                                 | 47                                                                                | 0    | 0    | 0    | 0    | 552                                                                               | 202  | 88   | 527                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 702    | 703   | 527    | - | - | - | 1      | 0 | - |
| Stage 1              | 702    | 702   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 335    | 345   | 524    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 407    | 420   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 309    | 318   | 524    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 309    | 318   | -      | - | - | - | -      | - | - |
| Stage 1              | 375    | 387   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 14.31 |    | 1.05 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 309   | 524   | 257   | -   |
| HCM Lane V/C Ratio    | 0.08  | 0.089 | 0.055 | -   |
| HCM Ctrl Dly (s/v)    | 17.7  | 12.5  | 7.4   | 0   |
| HCM Lane LOS          | C     | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0.3   | 0.3   | 0.2   | -   |



**Intersection**

Int Delay, s/veh 29.7

| Movement                 | EBL   | EBT   | EBR                                                                               | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|-------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |       |       |  |      |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 0     | 0     | 0                                                                                 | 161  | 1                                                                                 | 73                                                                                | 57   | 410                                                                               | 0    | 0    | 337                                                                                 | 35   |
| Future Vol, veh/h        | 0     | 0     | 0                                                                                 | 161  | 1                                                                                 | 73                                                                                | 57   | 410                                                                               | 0    | 0    | 337                                                                                 | 35   |
| Conflicting Peds, #/hr   | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Yield | Yield | Yield                                                                             | Stop | Stop                                                                              | Stop                                                                              | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -     | -     | Yield                                                                             | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -     | -     | 0                                                                                 | -    | -                                                                                 | 25                                                                                | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 78    | 78    | 78                                                                                | 78   | 78                                                                                | 78                                                                                | 78   | 78                                                                                | 78   | 78   | 78                                                                                  | 78   |
| Heavy Vehicles, %        | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Mvmt Flow                | 0     | 0     | 0                                                                                 | 206  | 1                                                                                 | 94                                                                                | 73   | 526                                                                               | 0    | 0    | 432                                                                                 | 45   |

| Major/Minor          | Minor1 | Major1 | Major2 |      |   |   |   |   |   |   |  |
|----------------------|--------|--------|--------|------|---|---|---|---|---|---|--|
| Conflicting Flow All | 1104   | 1149   | 526    | 477  | 0 | - | - | - | - | 0 |  |
| Stage 1              | 672    | 672    | -      | -    | - | - | - | - | - | - |  |
| Stage 2              | 432    | 477    | -      | -    | - | - | - | - | - | - |  |
| Critical Hdwy        | 7.1    | 6.5    | 6.2    | 4.1  | - | - | - | - | - | - |  |
| Critical Hdwy Stg 1  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |  |
| Critical Hdwy Stg 2  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |  |
| Follow-up Hdwy       | 3.5    | 4      | 3.3    | 2.2  | - | - | - | - | - | - |  |
| Pot Cap-1 Maneuver   | ~ 190  | 200    | 556    | 1096 | - | 0 | 0 | - | - | - |  |
| Stage 1              | 449    | 458    | -      | -    | - | 0 | 0 | - | - | - |  |
| Stage 2              | 606    | 560    | -      | -    | - | 0 | 0 | - | - | - |  |
| Platoon blocked, %   |        |        |        |      | - |   |   | - |   | - |  |
| Mov Cap-1 Maneuver   | ~ 172  | 181    | 556    | 1096 | - | - | - | - | - | - |  |
| Mov Cap-2 Maneuver   | ~ 172  | 181    | -      | -    | - | - | - | - | - | - |  |
| Stage 1              | 406    | 415    | -      | -    | - | - | - | - | - | - |  |
| Stage 2              | 606    | 560    | -      | -    | - | - | - | - | - | - |  |

| Approach          | WB     | NB   | SB |
|-------------------|--------|------|----|
| HCM Ctrl Dly, s/v | 133.65 | 1.04 | 0  |
| HCM LOS           | F      |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT   | SBR |
|-----------------------|-------|---------------|-------|-----|
| Capacity (veh/h)      | 220   | - 172         | 556   | - - |
| HCM Lane V/C Ratio    | 0.067 | - 1.205       | 0.168 | - - |
| HCM Ctrl Dly (s/v)    | 8.5   | 0 188.1       | 12.8  | - - |
| HCM Lane LOS          | A     | A F           | B     | - - |
| HCM 95th %tile Q(veh) | 0.2   | - 11.3        | 0.6   | - - |

**Notes**

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

| Intersection             |      |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.5  |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 12   | 4                                                                                 | 38                                                                                | 48   | 1                                                                                 | 12   | 32                                                                                | 379                                                                               | 72   | 6                                                                                   | 286                                                                                 | 6    |
| Future Vol, veh/h        | 12   | 4                                                                                 | 38                                                                                | 48   | 1                                                                                 | 12   | 32                                                                                | 379                                                                               | 72   | 6                                                                                   | 286                                                                                 | 6    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                  | 75                                                                                  | 75   |
| Heavy Vehicles, %        | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Mvmt Flow                | 16   | 5                                                                                 | 51                                                                                | 64   | 1                                                                                 | 16   | 43                                                                                | 505                                                                               | 96   | 8                                                                                   | 381                                                                                 | 8    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |     | Major2 |   |   |     |   |   |
|----------------------|--------|------|--------|------|--------|-----|--------|---|---|-----|---|---|
| Conflicting Flow All | 993    | 1088 | 385    | 1039 | 1044   | 553 | 389    | 0 | 0 | 601 | 0 | 0 |
| Stage 1              | 401    | 401  | -      | 639  | 639    | -   | -      | - | - | -   | - | - |
| Stage 2              | 591    | 687  | -      | 400  | 405    | -   | -      | - | - | -   | - | - |
| Critical Hdwy        | 7.1    | 6.5  | 6.2    | 7.1  | 6.5    | 6.2 | 4.1    | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -   | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -   | - | - |
| Follow-up Hdwy       | 3.5    | 4    | 3.3    | 3.5  | 4      | 3.3 | 2.2    | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver   | 226    | 218  | 667    | 211  | 231    | 536 | 1180   | - | - | 986 | - | - |
| Stage 1              | 629    | 604  | -      | 468  | 474    | -   | -      | - | - | -   | - | - |
| Stage 2              | 497    | 451  | -      | 630  | 602    | -   | -      | - | - | -   | - | - |
| Platoon blocked, %   |        |      |        |      |        |     |        | - | - |     | - | - |
| Mov Cap-1 Maneuver   | 209    | 208  | 667    | 182  | 221    | 536 | 1180   | - | - | 986 | - | - |
| Mov Cap-2 Maneuver   | 209    | 208  | -      | 182  | 221    | -   | -      | - | - | -   | - | - |
| Stage 1              | 624    | 599  | -      | 451  | 457    | -   | -      | - | - | -   | - | - |
| Stage 2              | 463    | 434  | -      | 573  | 597    | -   | -      | - | - | -   | - | - |

| Approach          | EB    |  | WB    |  | NB   |  | SB   |  |
|-------------------|-------|--|-------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 14.81 |  | 32.71 |  | 0.54 |  | 0.17 |  |
| HCM LOS           | B     |  | D     |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1180  | -   | -   | 209   | 667   | 209   | 986   | -   | -   |
| HCM Lane V/C Ratio    | 0.036 | -   | -   | 0.102 | 0.076 | 0.388 | 0.008 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.2   | -   | -   | 24.2  | 10.8  | 32.7  | 8.7   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | D     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3   | 0.2   | 1.7   | 0     | -   | -   |

Intersection

Int Delay, s/veh 15

| Movement                 | EBL  | EBT                                                                               | EBR  | WBL  | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |      |      |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 92   | 2                                                                                 | 13   | 32   | 2                                                                                 | 50                                                                                | 5                                                                                 | 466                                                                               | 34   | 54                                                                                  | 655                                                                                 | 101  |
| Future Vol, veh/h        | 92   | 2                                                                                 | 13   | 32   | 2                                                                                 | 50                                                                                | 5                                                                                 | 466                                                                               | 34   | 54                                                                                  | 655                                                                                 | 101  |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop | Stop                                                                              | Stop | Stop | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None | -    | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | -    | -    | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -    | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -    | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 93   | 93                                                                                | 93   | 93   | 93                                                                                | 93                                                                                | 93                                                                                | 93                                                                                | 93   | 93                                                                                  | 93                                                                                  | 93   |
| Heavy Vehicles, %        | 8    | 8                                                                                 | 8    | 0    | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 99   | 2                                                                                 | 14   | 34   | 2                                                                                 | 54                                                                                | 5                                                                                 | 501                                                                               | 37   | 58                                                                                  | 704                                                                                 | 109  |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|---|-------|---|---|
| Conflicting Flow All | 1389   | 1424  | 760    | 1352 | 1460   | 519 | 814    | 0 | 0 | 538   | 0 | 0 |
| Stage 1              | 876    | 876   | -      | 530  | 530    | -   | -      | - | - | -     | - | - |
| Stage 2              | 513    | 548   | -      | 822  | 930    | -   | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.18   | 6.58  | 6.28   | 7.1  | 6.5    | 6.2 | 4.14   | - | - | 4.15  | - | - |
| Critical Hdwy Stg 1  | 6.18   | 5.58  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.18   | 5.58  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.572  | 4.072 | 3.372  | 3.5  | 4      | 3.3 | 2.236  | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver   | 116    | 132   | 397    | 129  | 130    | 561 | 804    | - | - | 1016  | - | - |
| Stage 1              | 335    | 358   | -      | 536  | 530    | -   | -      | - | - | -     | - | - |
| Stage 2              | 533    | 507   | -      | 371  | 349    | -   | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | ~ 97   | 123   | 396    | 114  | 122    | 561 | 804    | - | - | 1016  | - | - |
| Mov Cap-2 Maneuver   | ~ 97   | 123   | -      | 114  | 122    | -   | -      | - | - | -     | - | - |
| Stage 1              | 316    | 338   | -      | 533  | 526    | -   | -      | - | - | -     | - | - |
| Stage 2              | 477    | 504   | -      | 336  | 328    | -   | -      | - | - | -     | - | - |

| Approach          | EB     |  | WB    |  | NB   |  | SB   |  |
|-------------------|--------|--|-------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 183.91 |  | 27.62 |  | 0.09 |  | 0.58 |  |
| HCM LOS           | F      |  | D     |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1WBLn2         | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------------------------|-----|-----|-----|
| Capacity (veh/h)      | 804   | -   | -   | 107 115 561 1016        | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.007 | -   | -   | 1.074 0.319 0.096 0.057 | -   | -   | -   |
| HCM Ctrl Dly (s/v)    | 9.5   | -   | -   | 183.9 50.4 12.1 8.8     | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F F B A                 | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 7.1 1.2 0.3 0.2         | -   | -   | -   |

Notes

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

**Intersection**

Int Delay, s/veh 6.7

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 88   | 0                                                                                 | 119                                                                               | 0    | 0    | 0    | 0    | 380                                                                               | 228  | 119  | 691                                                                                 | 0    |
| Future Vol, veh/h        | 88   | 0                                                                                 | 119                                                                               | 0    | 0    | 0    | 0    | 380                                                                               | 228  | 119  | 691                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94   | 94   | 94                                                                                | 94   | 94   | 94                                                                                  | 94   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 94   | 0                                                                                 | 127                                                                               | 0    | 0    | 0    | 0    | 404                                                                               | 243  | 127  | 735                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 988    | 989   | 735    | - | - | - | 1      | 0 | - |
| Stage 1              | 988    | 988   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 213    | 233   | 397    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 280    | 308   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 185    | 202   | 397    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 185    | 202   | -      | - | - | - | -      | - | - |
| Stage 1              | 243    | 266   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 28.78 |    | 1.09 |
| HCM LOS           | D     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 185   | 397   | 264   | -   |
| HCM Lane V/C Ratio    | 0.507 | 0.319 | 0.079 | -   |
| HCM Ctrl Dly (s/v)    | 43    | 18.2  | 7.4   | 0   |
| HCM Lane LOS          | E     | C     | A     | A   |
| HCM 95th %tile Q(veh) | 2.5   | 1.3   | 0.3   | -   |

**Intersection**

Int Delay, s/veh 83.8

| Movement                 | EBL   | EBT   | EBR                                                                               | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|-------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |       |       |  |      |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 0     | 0     | 0                                                                                 | 249  | 0                                                                                 | 136                                                                               | 66   | 402                                                                               | 0    | 0    | 561                                                                                 | 50   |
| Future Vol, veh/h        | 0     | 0     | 0                                                                                 | 249  | 0                                                                                 | 136                                                                               | 66   | 402                                                                               | 0    | 0    | 561                                                                                 | 50   |
| Conflicting Peds, #/hr   | 0     | 0     | 1                                                                                 | 1    | 0                                                                                 | 0                                                                                 | 4    | 0                                                                                 | 0    | 0    | 0                                                                                   | 4    |
| Sign Control             | Yield | Yield | Yield                                                                             | Stop | Stop                                                                              | Stop                                                                              | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -     | -     | Yield                                                                             | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -     | -     | 0                                                                                 | -    | -                                                                                 | 25                                                                                | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| 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, %        | 0     | 0     | 0                                                                                 | 7    | 7                                                                                 | 7                                                                                 | 18   | 18                                                                                | 18   | 17   | 17                                                                                  | 17   |
| Mvmt Flow                | 0     | 0     | 0                                                                                 | 271  | 0                                                                                 | 148                                                                               | 72   | 437                                                                               | 0    | 0    | 610                                                                                 | 54   |

| Major/Minor          | Minor1 | Major1 | Major2 |       |   |   |   |   |   |   |  |
|----------------------|--------|--------|--------|-------|---|---|---|---|---|---|--|
| Conflicting Flow All | 1191   | 1249   | 437    | 668   | 0 | - | - | - | - | 0 |  |
| Stage 1              | 580    | 580    | -      | -     | - | - | - | - | - | - |  |
| Stage 2              | 611    | 668    | -      | -     | - | - | - | - | - | - |  |
| Critical Hdwy        | 7.17   | 6.57   | 6.27   | 4.28  | - | - | - | - | - | - |  |
| Critical Hdwy Stg 1  | 6.17   | 5.57   | -      | -     | - | - | - | - | - | - |  |
| Critical Hdwy Stg 2  | 6.17   | 5.57   | -      | -     | - | - | - | - | - | - |  |
| Follow-up Hdwy       | 3.563  | 4.063  | 3.363  | 2.362 | - | - | - | - | - | - |  |
| Pot Cap-1 Maneuver   | ~ 160  | 169    | 609    | 851   | - | 0 | 0 | - | - | - |  |
| Stage 1              | 491    | 492    | -      | -     | - | 0 | 0 | - | - | - |  |
| Stage 2              | 473    | 449    | -      | -     | - | 0 | 0 | - | - | - |  |
| Platoon blocked, %   |        |        |        |       | - |   |   | - | - | - |  |
| Mov Cap-1 Maneuver   | ~ 142  | 150    | 609    | 851   | - | - | - | - | - | - |  |
| Mov Cap-2 Maneuver   | ~ 142  | 150    | -      | -     | - | - | - | - | - | - |  |
| Stage 1              | 436    | 437    | -      | -     | - | - | - | - | - | - |  |
| Stage 2              | 472    | 449    | -      | -     | - | - | - | - | - | - |  |

| Approach          | WB        | NB   | SB |
|-------------------|-----------|------|----|
| HCM Ctrl Dly, s/v | \$ 317.01 | 1.36 | 0  |
| HCM LOS           | F         |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2  | SBT | SBR |
|-----------------------|-------|----------------|-----|-----|
| Capacity (veh/h)      | 254   | - 142 609      | -   | -   |
| HCM Lane V/C Ratio    | 0.084 | - 1.9 0.243    | -   | -   |
| HCM Ctrl Dly (s/v)    | 9.6   | 0\$ 483.2 12.8 | -   | -   |
| HCM Lane LOS          | A     | A F B          | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | - 20.9 0.9     | -   | -   |

**Notes**

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

Intersection

Int Delay, s/veh 5.4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 6    | 0                                                                                 | 89                                                                                | 71   | 4                                                                                 | 7    | 68                                                                                | 371                                                                               | 99   | 6                                                                                   | 451                                                                                 | 8    |
| Future Vol, veh/h        | 6    | 0                                                                                 | 89                                                                                | 71   | 4                                                                                 | 7    | 68                                                                                | 371                                                                               | 99   | 6                                                                                   | 451                                                                                 | 8    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| 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, %        | 3    | 3                                                                                 | 3                                                                                 | 0    | 0                                                                                 | 0    | 7                                                                                 | 7                                                                                 | 7    | 6                                                                                   | 6                                                                                   | 6    |
| Mvmt Flow                | 7    | 0                                                                                 | 97                                                                                | 77   | 4                                                                                 | 8    | 74                                                                                | 403                                                                               | 108  | 7                                                                                   | 490                                                                                 | 9    |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|---|-------|---|---|
| Conflicting Flow All | 1061   | 1166  | 495    | 1108 | 1117   | 457 | 499    | 0 | 0 | 511   | 0 | 0 |
| Stage 1              | 508    | 508   | -      | 605  | 605    | -   | -      | - | - | -     | - | - |
| Stage 2              | 553    | 659   | -      | 503  | 512    | -   | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.13   | 6.53  | 6.23   | 7.1  | 6.5    | 6.2 | 4.17   | - | - | 4.16  | - | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.527  | 4.027 | 3.327  | 3.5  | 4      | 3.3 | 2.263  | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver   | 201    | 193   | 573    | 189  | 209    | 608 | 1040   | - | - | 1034  | - | - |
| Stage 1              | 546    | 537   | -      | 488  | 491    | -   | -      | - | - | -     | - | - |
| Stage 2              | 515    | 459   | -      | 554  | 540    | -   | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 179    | 178   | 573    | 145  | 193    | 608 | 1040   | - | - | 1034  | - | - |
| Mov Cap-2 Maneuver   | 179    | 178   | -      | 145  | 193    | -   | -      | - | - | -     | - | - |
| Stage 1              | 542    | 534   | -      | 453  | 456    | -   | -      | - | - | -     | - | - |
| Stage 2              | 468    | 427   | -      | 458  | 536    | -   | -      | - | - | -     | - | - |

| Approach          | EB   | WB    | NB  | SB   |
|-------------------|------|-------|-----|------|
| HCM Ctrl Dly, s/v | 13.4 | 54.41 | 1.1 | 0.11 |
| HCM LOS           | B    | F     |     |      |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1040  | -   | -   | 179   | 573   | 157   | 1034  | -   | -   |
| HCM Lane V/C Ratio    | 0.071 | -   | -   | 0.036 | 0.169 | 0.568 | 0.006 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.7   | -   | -   | 25.8  | 12.6  | 54.4  | 8.5   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | D     | B     | F     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0.1   | 0.6   | 2.9   | 0     | -   | -   |

| Intersection             |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 5.9    |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |  |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 66     | 0                                                                                 | 4      | 16    | 0                                                                                 | 30                                                                                | 0                                                                                 | 563                                                                               | 14   | 22                                                                                  | 415                                                                                 | 65   |
| Future Vol, veh/h        | 66     | 0                                                                                 | 4      | 16    | 0                                                                                 | 30                                                                                | 0                                                                                 | 563                                                                               | 14   | 22                                                                                  | 415                                                                                 | 65   |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 1    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | 150                                                                               | 175                                                                               | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 81     | 81                                                                                | 81     | 81    | 81                                                                                | 81                                                                                | 81                                                                                | 81                                                                                | 81   | 81                                                                                  | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 8      | 8                                                                                 | 8      | 0     | 0                                                                                 | 0                                                                                 | 4                                                                                 | 4                                                                                 | 4    | 5                                                                                   | 5                                                                                   | 5    |
| Mvmt Flow                | 81     | 0                                                                                 | 5      | 20    | 0                                                                                 | 37                                                                                | 0                                                                                 | 695                                                                               | 17   | 27                                                                                  | 512                                                                                 | 80   |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |                                                                                   | Major2                                                                            |                                                                                   |      |                                                                                     |                                                                                     |      |
| Conflicting Flow All     | 1303   | 1320                                                                              | 553    | 1270  | 1352                                                                              | 704                                                                               | 594                                                                               | 0                                                                                 | 0    | 712                                                                                 | 0                                                                                   | 0    |
| Stage 1                  | 608    | 608                                                                               | -      | 704   | 704                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 695    | 712                                                                               | -      | 567   | 648                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy            | 7.18   | 6.58                                                                              | 6.28   | 7.1   | 6.5                                                                               | 6.2                                                                               | 4.14                                                                              | -                                                                                 | -    | 4.15                                                                                | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.18   | 5.58                                                                              | -      | 6.1   | 5.5                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Follow-up Hdwy           | 3.572  | 4.072                                                                             | 3.372  | 3.5   | 4                                                                                 | 3.3                                                                               | 2.236                                                                             | -                                                                                 | -    | 2.245                                                                               | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 134    | 152                                                                               | 521    | 146   | 152                                                                               | 441                                                                               | 973                                                                               | -                                                                                 | -    | 874                                                                                 | -                                                                                   | -    |
| Stage 1                  | 473    | 477                                                                               | -      | 431   | 443                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 423    | 427                                                                               | -      | 512   | 469                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                     | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 118    | 148                                                                               | 520    | 140   | 147                                                                               | 441                                                                               | 972                                                                               | -                                                                                 | -    | 874                                                                                 | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 118    | 148                                                                               | -      | 140   | 147                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 1                  | 458    | 461                                                                               | -      | 431   | 443                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
| Stage 2                  | 387    | 427                                                                               | -      | 492   | 454                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -    | -                                                                                   | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |                                                                                   | SB                                                                                |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 83.25  |                                                                                   | 21.18  |       | 0                                                                                 |                                                                                   | 0.41                                                                              |                                                                                   |      |                                                                                     |                                                                                     |      |
| HCM LOS                  | F      |                                                                                   | C      |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | WBLn2                                                                             | SBL                                                                               | SBT                                                                               | SBR  |                                                                                     |                                                                                     |      |
| Capacity (veh/h)         | 972    | -                                                                                 | -      | 124   | 140                                                                               | 441                                                                               | 874                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -      | 0.697 | 0.141                                                                             | 0.084                                                                             | 0.031                                                                             | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 0      | -                                                                                 | -      | 83.2  | 34.8                                                                              | 13.9                                                                              | 9.3                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM Lane LOS             | A      | -                                                                                 | -      | F     | D                                                                                 | B                                                                                 | A                                                                                 | -                                                                                 | -    |                                                                                     |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 3.8   | 0.5                                                                               | 0.3                                                                               | 0.1                                                                               | -                                                                                 | -    |                                                                                     |                                                                                     |      |

**Intersection**

Int Delay, s/veh 2.5

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 21   | 0                                                                                 | 39                                                                                | 0    | 0    | 0    | 0    | 484                                                                               | 175  | 77   | 463                                                                                 | 0    |
| Future Vol, veh/h        | 21   | 0                                                                                 | 39                                                                                | 0    | 0    | 0    | 0    | 484                                                                               | 175  | 77   | 463                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 81   | 81                                                                                | 81                                                                                | 81   | 81   | 81   | 81   | 81                                                                                | 81   | 81   | 81                                                                                  | 81   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 26   | 0                                                                                 | 48                                                                                | 0    | 0    | 0    | 0    | 598                                                                               | 216  | 95   | 572                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 762    | 763   | 572    | - | - | - | 1      | 0 | - |
| Stage 1              | 762    | 762   | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 305    | 318   | 494    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 377    | 394   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 278    | 291   | 494    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 278    | 291   | -      | - | - | - | -      | - | - |
| Stage 1              | 344    | 360   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 15.23 |    | 1.05 |
| HCM LOS           | C     |    |      |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 278   | 494   | 257   | -   |
| HCM Lane V/C Ratio    | 0.093 | 0.097 | 0.059 | -   |
| HCM Ctrl Dly (s/v)    | 19.2  | 13.1  | 7.4   | 0   |
| HCM Lane LOS          | C     | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0.3   | 0.3   | 0.2   | -   |



**Intersection**

Int Delay, s/veh 48.6

| Movement                 | EBL   | EBT   | EBR                                                                               | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|-------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |       |       |  |      |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 0     | 0     | 0                                                                                 | 173  | 1                                                                                 | 79                                                                                | 59   | 446                                                                               | 0    | 0    | 367                                                                                 | 38   |
| Future Vol, veh/h        | 0     | 0     | 0                                                                                 | 173  | 1                                                                                 | 79                                                                                | 59   | 446                                                                               | 0    | 0    | 367                                                                                 | 38   |
| Conflicting Peds, #/hr   | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Yield | Yield | Yield                                                                             | Stop | Stop                                                                              | Stop                                                                              | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -     | -     | Yield                                                                             | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -     | -     | 0                                                                                 | -    | -                                                                                 | 25                                                                                | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -     | 0     | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 78    | 78    | 78                                                                                | 78   | 78                                                                                | 78                                                                                | 78   | 78                                                                                | 78   | 78   | 78                                                                                  | 78   |
| Heavy Vehicles, %        | 0     | 0     | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Mvmt Flow                | 0     | 0     | 0                                                                                 | 222  | 1                                                                                 | 101                                                                               | 76   | 572                                                                               | 0    | 0    | 471                                                                                 | 49   |

| Major/Minor          | Minor1 | Major1 | Major2 |      |   |   |   |   |   |   |
|----------------------|--------|--------|--------|------|---|---|---|---|---|---|
| Conflicting Flow All | 1194   | 1242   | 572    | 519  | 0 | - | - | - | - | 0 |
| Stage 1              | 723    | 723    | -      | -    | - | - | - | - | - | - |
| Stage 2              | 471    | 519    | -      | -    | - | - | - | - | - | - |
| Critical Hdwy        | 7.1    | 6.5    | 6.2    | 4.1  | - | - | - | - | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5    | -      | -    | - | - | - | - | - | - |
| Follow-up Hdwy       | 3.5    | 4      | 3.3    | 2.2  | - | - | - | - | - | - |
| Pot Cap-1 Maneuver   | ~ 165  | 176    | 524    | 1057 | - | 0 | 0 | - | - | - |
| Stage 1              | 421    | 434    | -      | -    | - | 0 | 0 | - | - | - |
| Stage 2              | 577    | 536    | -      | -    | - | 0 | 0 | - | - | - |
| Platoon blocked, %   |        |        |        |      | - |   |   | - | - |   |
| Mov Cap-1 Maneuver   | ~ 148  | 158    | 524    | 1057 | - | - | - | - | - | - |
| Mov Cap-2 Maneuver   | ~ 148  | 158    | -      | -    | - | - | - | - | - | - |
| Stage 1              | 377    | 388    | -      | -    | - | - | - | - | - | - |
| Stage 2              | 577    | 536    | -      | -    | - | - | - | - | - | - |

| Approach          | WB     | NB   | SB |
|-------------------|--------|------|----|
| HCM Ctrl Dly, s/v | 221.53 | 1.01 | 0  |
| HCM LOS           | F      |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT | SBR |
|-----------------------|-------|---------------|-----|-----|
| Capacity (veh/h)      | 210   | - 148 524     | -   | -   |
| HCM Lane V/C Ratio    | 0.072 | - 1.509 0.193 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.7   | 0 \$ 316 13.5 | -   | -   |
| HCM Lane LOS          | A     | A F B         | -   | -   |
| HCM 95th %tile Q(veh) | 0.2   | - 15 0.7      | -   | -   |

**Notes**

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

**Intersection**

Int Delay, s/veh 4.4

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 14   | 5                                                                                 | 42                                                                                | 52   | 1                                                                                 | 14   | 35                                                                                | 412                                                                               | 78   | 7                                                                                   | 311                                                                                 | 7    |
| Future Vol, veh/h        | 14   | 5                                                                                 | 42                                                                                | 52   | 1                                                                                 | 14   | 35                                                                                | 412                                                                               | 78   | 7                                                                                   | 311                                                                                 | 7    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | -    | -                                                                                   | 0                                                                                   | -    |
| Peak Hour Factor         | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                | 75   | 75                                                                                | 75                                                                                | 75   | 75                                                                                  | 75                                                                                  | 75   |
| Heavy Vehicles, %        | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Mvmt Flow                | 19   | 7                                                                                 | 56                                                                                | 69   | 1                                                                                 | 19   | 47                                                                                | 549                                                                               | 104  | 9                                                                                   | 415                                                                                 | 9    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |     | Major2 |   |   |     |   |   |
|----------------------|--------|------|--------|------|--------|-----|--------|---|---|-----|---|---|
| Conflicting Flow All | 1081   | 1185 | 419    | 1131 | 1137   | 601 | 424    | 0 | 0 | 653 | 0 | 0 |
| Stage 1              | 438    | 438  | -      | 695  | 695    | -   | -      | - | - | -   | - | - |
| Stage 2              | 643    | 747  | -      | 437  | 443    | -   | -      | - | - | -   | - | - |
| Critical Hdwy        | 7.1    | 6.5  | 6.2    | 7.1  | 6.5    | 6.2 | 4.1    | - | - | 4.1 | - | - |
| Critical Hdwy Stg 1  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -   | - | - |
| Critical Hdwy Stg 2  | 6.1    | 5.5  | -      | 6.1  | 5.5    | -   | -      | - | - | -   | - | - |
| Follow-up Hdwy       | 3.5    | 4    | 3.3    | 3.5  | 4      | 3.3 | 2.2    | - | - | 2.2 | - | - |
| Pot Cap-1 Maneuver   | 197    | 191  | 638    | 182  | 203    | 504 | 1146   | - | - | 943 | - | - |
| Stage 1              | 601    | 582  | -      | 436  | 447    | -   | -      | - | - | -   | - | - |
| Stage 2              | 465    | 423  | -      | 602  | 579    | -   | -      | - | - | -   | - | - |
| Platoon blocked, %   |        |      |        |      |        |     |        | - | - |     | - | - |
| Mov Cap-1 Maneuver   | 179    | 181  | 638    | 152  | 193    | 504 | 1146   | - | - | 943 | - | - |
| Mov Cap-2 Maneuver   | 179    | 181  | -      | 152  | 193    | -   | -      | - | - | -   | - | - |
| Stage 1              | 595    | 576  | -      | 418  | 429    | -   | -      | - | - | -   | - | - |
| Stage 2              | 428    | 406  | -      | 538  | 574    | -   | -      | - | - | -   | - | - |

| Approach          | EB    | WB    | NB   | SB   |
|-------------------|-------|-------|------|------|
| HCM Ctrl Dly, s/v | 16.52 | 43.66 | 0.55 | 0.19 |
| HCM LOS           | C     | E     |      |      |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL  | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|------|-----|-----|
| Capacity (veh/h)      | 1146  | -   | -   | 180   | 638   | 179   | 943  | -   | -   |
| HCM Lane V/C Ratio    | 0.041 | -   | -   | 0.141 | 0.088 | 0.499 | 0.01 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.3   | -   | -   | 28.3  | 11.2  | 43.7  | 8.9  | -   | -   |
| HCM Lane LOS          | A     | -   | -   | D     | B     | E     | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.5   | 0.3   | 2.5   | 0    | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 23   |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    | ↗    | ↗    | ↗    | ↗    | ↗    | ↗    |      |
| Traffic Vol, veh/h       | 93   | 2    | 14   | 35   | 2    | 55   | 6    | 508  | 38   | 59   | 714  | 103  |
| Future Vol, veh/h        | 93   | 2    | 14   | 35   | 2    | 55   | 6    | 508  | 38   | 59   | 714  | 103  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 1    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 150  | 175  | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 0    | 0    | 0    | 4    | 4    | 4    | 5    | 5    | 5    |
| Mvmt Flow                | 100  | 2    | 15   | 38   | 2    | 59   | 6    | 546  | 41   | 63   | 768  | 111  |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|---|-------|---|---|
| Conflicting Flow All | 1511   | 1551  | 824    | 1475 | 1586   | 567 | 879    | 0 | 0 | 587   | 0 | 0 |
| Stage 1              | 951    | 951   | -      | 580  | 580    | -   | -      | - | - | -     | - | - |
| Stage 2              | 560    | 600   | -      | 896  | 1006   | -   | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.18   | 6.58  | 6.28   | 7.1  | 6.5    | 6.2 | 4.14   | - | - | 4.15  | - | - |
| Critical Hdwy Stg 1  | 6.18   | 5.58  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.18   | 5.58  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.572  | 4.072 | 3.372  | 3.5  | 4      | 3.3 | 2.236  | - | - | 2.245 | - | - |
| Pot Cap-1 Maneuver   | ~ 96   | 110   | 364    | 106  | 109    | 527 | 760    | - | - | 973   | - | - |
| Stage 1              | 304    | 330   | -      | 504  | 504    | -   | -      | - | - | -     | - | - |
| Stage 2              | 502    | 480   | -      | 338  | 321    | -   | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | ~ 77   | 102   | 364    | 92   | 101    | 527 | 759    | - | - | 973   | - | - |
| Mov Cap-2 Maneuver   | ~ 77   | 102   | -      | 92   | 101    | -   | -      | - | - | -     | - | - |
| Stage 1              | 284    | 309   | -      | 500  | 499    | -   | -      | - | - | -     | - | - |
| Stage 2              | 440    | 476   | -      | 301  | 300    | -   | -      | - | - | -     | - | - |

| Approach          | EB        |  | WB |  | NB   |  | SB  |  |
|-------------------|-----------|--|----|--|------|--|-----|--|
| HCM Ctrl Dly, s/v | \$ 307.78 |  | 36 |  | 0.11 |  | 0.6 |  |
| HCM LOS           | F         |  | E  |  |      |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1WBLn2         | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------------------------|-----|-----|-----|
| Capacity (veh/h)      | 759   | -   | -   | 86 92 527 973           | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.008 | -   | -   | 1.362 0.431 0.112 0.065 | -   | -   | -   |
| HCM Ctrl Dly (s/v)    | 9.8   | -   | -   | \$ 307.8 70.6 12.7 9    | -   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F F B A                 | -   | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 8.9 1.8 0.4 0.2         | -   | -   | -   |

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

**Intersection**

Int Delay, s/veh 8.7

| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT  | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |  |      |      |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 96   | 0                                                                                 | 126                                                                               | 0    | 0    | 0    | 0    | 411                                                                               | 245  | 130  | 750                                                                                 | 0    |
| Future Vol, veh/h        | 96   | 0                                                                                 | 126                                                                               | 0    | 0    | 0    | 0    | 411                                                                               | 245  | 130  | 750                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0    | 2    | 0                                                                                 | 1    | 1    | 0                                                                                   | 2    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Free | Free | Free | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -    | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 25                                                                                | -    | -    | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -                                                                                 | -    | 0    | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94   | 94   | 94                                                                                | 94   | 94   | 94                                                                                  | 94   |
| Heavy Vehicles, %        | 16   | 16                                                                                | 16                                                                                | 0    | 0    | 0    | 5    | 5                                                                                 | 5    | 5    | 5                                                                                   | 5    |
| Mvmt Flow                | 102  | 0                                                                                 | 134                                                                               | 0    | 0    | 0    | 0    | 437                                                                               | 261  | 138  | 798                                                                                 | 0    |

| Major/Minor          | Minor1 |       | Major2 |   |   |   | Major1 |   |   |
|----------------------|--------|-------|--------|---|---|---|--------|---|---|
| Conflicting Flow All | 1074   | 1075  | 798    | - | - | - | 1      | 0 | - |
| Stage 1              | 1074   | 1074  | -      | - | - | - | -      | - | - |
| Stage 2              | 0      | 1     | -      | - | - | - | -      | - | - |
| Critical Hdwy        | 7.26   | 6.66  | 6.36   | - | - | - | 4.15   | - | - |
| Critical Hdwy Stg 1  | 6.26   | 5.66  | -      | - | - | - | -      | - | - |
| Critical Hdwy Stg 2  | -      | -     | -      | - | - | - | -      | - | - |
| Follow-up Hdwy       | 3.644  | 4.144 | 3.444  | - | - | - | 2.245  | - | - |
| Pot Cap-1 Maneuver   | 186    | 207   | 365    | 0 | 0 | 0 | 1602   | - | 0 |
| Stage 1              | 250    | 280   | -      | 0 | 0 | 0 | -      | - | 0 |
| Stage 2              | -      | -     | -      | 0 | 0 | 0 | -      | - | 0 |
| Platoon blocked, %   |        |       |        |   |   |   |        | - |   |
| Mov Cap-1 Maneuver   | 157    | 175   | 365    | - | - | - | 1602   | - | - |
| Mov Cap-2 Maneuver   | 157    | 175   | -      | - | - | - | -      | - | - |
| Stage 1              | 211    | 236   | -      | - | - | - | -      | - | - |
| Stage 2              | -      | -     | -      | - | - | - | -      | - | - |

| Approach          | EB    | WB | SB  |
|-------------------|-------|----|-----|
| HCM Ctrl Dly, s/v | 38.85 |    | 1.1 |
| HCM LOS           | E     |    |     |

| Minor Lane/Major Mvmt | EBLn1 | EBLn2 | SBL   | SBT |
|-----------------------|-------|-------|-------|-----|
| Capacity (veh/h)      | 157   | 365   | 266   | -   |
| HCM Lane V/C Ratio    | 0.651 | 0.367 | 0.086 | -   |
| HCM Ctrl Dly (s/v)    | 63    | 20.5  | 7.5   | 0   |
| HCM Lane LOS          | F     | C     | A     | A   |
| HCM 95th %tile Q(veh) | 3.7   | 1.6   | 0.3   | -   |

**Intersection**

Int Delay, s/veh 124.5

| Movement                 | EBL   | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |       |       | ↗     |      | ↖    | ↗    |      | ↖    |      |      | ↖    |      |
| Traffic Vol, veh/h       | 0     | 0     | 0     | 268  | 0    | 149  | 68   | 439  | 0    | 0    | 612  | 54   |
| Future Vol, veh/h        | 0     | 0     | 0     | 268  | 0    | 149  | 68   | 439  | 0    | 0    | 612  | 54   |
| Conflicting Peds, #/hr   | 0     | 0     | 1     | 1    | 0    | 0    | 4    | 0    | 0    | 0    | 0    | 4    |
| Sign Control             | Yield | Yield | Yield | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -     | Yield | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -     | -     | 0     | -    | -    | 25   | -    | -    | -    | -    | -    | -    |
| 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, %        | 0     | 0     | 0     | 7    | 7    | 7    | 18   | 18   | 18   | 17   | 17   | 17   |
| Mvmt Flow                | 0     | 0     | 0     | 291  | 0    | 162  | 74   | 477  | 0    | 0    | 665  | 59   |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1291   | 1353   | 477    |
| Stage 1              | 625    | 625    | -      |
| Stage 2              | 666    | 728    | -      |
| Critical Hdwy        | 7.17   | 6.57   | 6.27   |
| Critical Hdwy Stg 1  | 6.17   | 5.57   | -      |
| Critical Hdwy Stg 2  | 6.17   | 5.57   | -      |
| Follow-up Hdwy       | 3.563  | 4.063  | 3.363  |
| Pot Cap-1 Maneuver   | ~ 137  | 146    | 578    |
| Stage 1              | 464    | 470    | -      |
| Stage 2              | 440    | 421    | -      |
| Platoon blocked, %   |        |        | -      |
| Mov Cap-1 Maneuver   | ~ 120  | 128    | 578    |
| Mov Cap-2 Maneuver   | ~ 120  | 128    | -      |
| Stage 1              | 406    | 411    | -      |
| Stage 2              | 440    | 421    | -      |

| Approach          | WB        | NB   | SB |
|-------------------|-----------|------|----|
| HCM Ctrl Dly, s/v | \$ 473.21 | 1.33 | 0  |
| HCM LOS           | F         |      |    |

| Minor Lane/Major Mvmt | NBL   | NBTWBLn1WBLn2 | SBT  | SBR |
|-----------------------|-------|---------------|------|-----|
| Capacity (veh/h)      | 241   | - 120         | 578  | -   |
| HCM Lane V/C Ratio    | 0.092 | - 2.436       | 0.28 | -   |
| HCM Ctrl Dly (s/v)    | 9.9   | 0\$ 728.7     | 13.6 | -   |
| HCM Lane LOS          | A     | A F           | B    | -   |
| HCM 95th %tile Q(veh) | 0.3   | - 25.7        | 1.1  | -   |

**Notes**

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

| Intersection             |      |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 8    |                                                                                   |                                                                                   |      |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                     |                                                                                     |      |
| Movement                 | EBL  | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR  | NBL                                                                               | NBT                                                                               | NBR  | SBL                                                                                 | SBT                                                                                 | SBR  |
| Lane Configurations      |      |  |  |      |  |      |  |  |      |  |  |      |
| Traffic Vol, veh/h       | 7    | 0                                                                                 | 98                                                                                | 77   | 5                                                                                 | 8    | 74                                                                                | 406                                                                               | 108  | 7                                                                                   | 491                                                                                 | 9    |
| Future Vol, veh/h        | 7    | 0                                                                                 | 98                                                                                | 77   | 5                                                                                 | 8    | 74                                                                                | 406                                                                               | 108  | 7                                                                                   | 491                                                                                 | 9    |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                   | 0                                                                                   | 0    |
| Sign Control             | Stop | Stop                                                                              | Stop                                                                              | Stop | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free | Free                                                                                | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -                                                                                 | -                                                                                 | None | -                                                                                   | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | 100                                                                               | -    | -                                                                                 | -    | 80                                                                                | -                                                                                 | -    | 100                                                                                 | -                                                                                   | -    |
| 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, %        | 3    | 3                                                                                 | 3                                                                                 | 0    | 0                                                                                 | 0    | 7                                                                                 | 7                                                                                 | 7    | 6                                                                                   | 6                                                                                   | 6    |
| Mvmt Flow                | 8    | 0                                                                                 | 107                                                                               | 84   | 5                                                                                 | 9    | 80                                                                                | 441                                                                               | 117  | 8                                                                                   | 534                                                                                 | 10   |

| Major/Minor          | Minor2 |       | Minor1 |      | Major1 |     | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|------|--------|-----|--------|---|---|-------|---|---|
| Conflicting Flow All | 1159   | 1273  | 539    | 1210 | 1220   | 500 | 543    | 0 | 0 | 559   | 0 | 0 |
| Stage 1              | 554    | 554   | -      | 661  | 661    | -   | -      | - | - | -     | - | - |
| Stage 2              | 605    | 720   | -      | 549  | 559    | -   | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.13   | 6.53  | 6.23   | 7.1  | 6.5    | 6.2 | 4.17   | - | - | 4.16  | - | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.13   | 5.53  | -      | 6.1  | 5.5    | -   | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.527  | 4.027 | 3.327  | 3.5  | 4      | 3.3 | 2.263  | - | - | 2.254 | - | - |
| Pot Cap-1 Maneuver   | 172    | 166   | 541    | 161  | 182    | 575 | 1001   | - | - | 992   | - | - |
| Stage 1              | 515    | 512   | -      | 455  | 463    | -   | -      | - | - | -     | - | - |
| Stage 2              | 483    | 431   | -      | 524  | 515    | -   | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |      |        |     |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 150    | 152   | 541    | 118  | 166    | 575 | 1001   | - | - | 992   | - | - |
| Mov Cap-2 Maneuver   | 150    | 152   | -      | 118  | 166    | -   | -      | - | - | -     | - | - |
| Stage 1              | 511    | 508   | -      | 418  | 426    | -   | -      | - | - | -     | - | - |
| Stage 2              | 432    | 396   | -      | 417  | 511    | -   | -      | - | - | -     | - | - |

| Approach          | EB    |  | WB    |  | NB   |  | SB   |  |
|-------------------|-------|--|-------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 14.41 |  | 90.03 |  | 1.12 |  | 0.12 |  |
| HCM LOS           | B     |  | F     |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1001 | -   | -   | 150   | 541   | 129   | 992   | -   | -   |
| HCM Lane V/C Ratio    | 0.08 | -   | -   | 0.051 | 0.197 | 0.758 | 0.008 | -   | -   |
| HCM Ctrl Dly (s/v)    | 8.9  | -   | -   | 30.3  | 13.3  | 90    | 8.7   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | D     | B     | F     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3  | -   | -   | 0.2   | 0.7   | 4.4   | 0     | -   | -   |

Queuing and Blocking Report  
AM Peak Hour: 2028 Background Conditions

06/03/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LT  | R   | L   |
| Maximum Queue (ft)    | 107 | 32  | 47  | 33  |
| Average Queue (ft)    | 40  | 9   | 16  | 6   |
| 95th Queue (ft)       | 82  | 29  | 41  | 23  |
| Link Distance (ft)    | 522 | 678 |     |     |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     | 150 | 100 |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 183 | 58 | 18  | 195 |
| Average Queue (ft)    | 118 | 27 | 1   | 45  |
| 95th Queue (ft)       | 469 | 58 | 6   | 126 |
| Link Distance (ft)    | 616 |    | 134 | 372 |
| Upstream Blk Time (%) | 13  |    |     |     |
| Queuing Penalty (veh) | 0   |    |     |     |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 7   | 24 |     |     |
| Queuing Penalty (veh) | 2   | 5  |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB | NB  |
|-----------------------|-----|----|-----|
| Directions Served     | LT  | R  | LT  |
| Maximum Queue (ft)    | 319 | 50 | 88  |
| Average Queue (ft)    | 85  | 38 | 20  |
| 95th Queue (ft)       | 244 | 63 | 60  |
| Link Distance (ft)    | 549 |    | 372 |
| Upstream Blk Time (%) | 0   |    |     |
| Queuing Penalty (veh) | 0   |    |     |
| Storage Bay Dist (ft) |     | 25 |     |
| Storage Blk Time (%)  | 45  | 6  |     |
| Queuing Penalty (veh) | 35  | 10 |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | NB  | SB  |
|-----------------------|-----|-----|-----|----|-----|-----|
| Directions Served     | LT  | R   | LTR | L  | TR  | L   |
| Maximum Queue (ft)    | 31  | 47  | 62  | 27 | 3   | 18  |
| Average Queue (ft)    | 11  | 22  | 26  | 3  | 0   | 1   |
| 95th Queue (ft)       | 33  | 44  | 50  | 18 | 3   | 11  |
| Link Distance (ft)    | 436 |     | 903 |    | 202 |     |
| Upstream Blk Time (%) |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 |     | 100 |
| Storage Blk Time (%)  |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |

Zone Summary

Zone wide Queuing Penalty: 52



Queuing and Blocking Report  
PM Peak Hour: 2028 Background Conditions

06/04/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | NB  | NB   | SB  | SB  |
|-----------------------|-----|-----|-----|-----|------|-----|-----|
| Directions Served     | LTR | LT  | R   | L   | TR   | L   | TR  |
| Maximum Queue (ft)    | 254 | 59  | 71  | 29  | 12   | 58  | 4   |
| Average Queue (ft)    | 82  | 17  | 27  | 3   | 1    | 15  | 0   |
| 95th Queue (ft)       | 200 | 43  | 55  | 16  | 7    | 42  | 3   |
| Link Distance (ft)    | 522 | 678 |     |     | 3077 |     | 134 |
| Upstream Blk Time (%) |     |     |     |     |      |     |     |
| Queuing Penalty (veh) |     |     |     |     |      |     |     |
| Storage Bay Dist (ft) |     |     | 150 | 175 |      | 100 |     |
| Storage Blk Time (%)  |     |     |     |     |      |     |     |
| Queuing Penalty (veh) |     |     |     |     |      |     |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 571 | 75 | 32  | 280 |
| Average Queue (ft)    | 233 | 57 | 3   | 83  |
| 95th Queue (ft)       | 558 | 99 | 15  | 203 |
| Link Distance (ft)    | 616 |    | 134 | 372 |
| Upstream Blk Time (%) | 8   |    |     |     |
| Queuing Penalty (veh) | 0   |    |     |     |
| Storage Bay Dist (ft) |     | 50 |     |     |
| Storage Blk Time (%)  | 54  | 11 |     |     |
| Queuing Penalty (veh) | 61  | 10 |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LT  | R   | LT  | TR  |
| Maximum Queue (ft)    | 580 | 63  | 198 | 31  |
| Average Queue (ft)    | 509 | 39  | 50  | 2   |
| 95th Queue (ft)       | 694 | 66  | 130 | 15  |
| Link Distance (ft)    | 549 |     | 372 | 202 |
| Upstream Blk Time (%) | 77  |     |     |     |
| Queuing Penalty (veh) | 0   |     |     |     |
| Storage Bay Dist (ft) |     | 25  |     |     |
| Storage Blk Time (%)  | 72  | 48  |     |     |
| Queuing Penalty (veh) | 99  | 110 |     |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | SB  | SB  |
|-----------------------|-----|-----|-----|----|-----|-----|
| Directions Served     | LT  | R   | LTR | L  | L   | TR  |
| Maximum Queue (ft)    | 31  | 70  | 69  | 53 | 24  | 27  |
| Average Queue (ft)    | 5   | 35  | 33  | 14 | 1   | 1   |
| 95th Queue (ft)       | 23  | 60  | 61  | 41 | 12  | 11  |
| Link Distance (ft)    | 436 |     | 903 |    |     | 249 |
| Upstream Blk Time (%) |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 | 100 |     |
| Storage Blk Time (%)  |     |     |     | 0  |     |     |
| Queuing Penalty (veh) |     |     |     | 0  |     |     |

Zone Summary

Zone wide Queuing Penalty: 279

Queuing and Blocking Report  
PM Peak Hour: 2028 Buildout Conditions

06/04/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | NB  | NB   | SB  |
|-----------------------|-----|-----|-----|-----|------|-----|
| Directions Served     | LTR | LT  | R   | L   | TR   | L   |
| Maximum Queue (ft)    | 280 | 65  | 82  | 29  | 43   | 58  |
| Average Queue (ft)    | 125 | 21  | 32  | 3   | 1    | 17  |
| 95th Queue (ft)       | 308 | 51  | 65  | 17  | 11   | 45  |
| Link Distance (ft)    | 522 | 676 |     |     | 3077 |     |
| Upstream Blk Time (%) | 0   |     |     |     |      |     |
| Queuing Penalty (veh) | 0   |     |     |     |      |     |
| Storage Bay Dist (ft) |     |     | 150 | 175 |      | 100 |
| Storage Blk Time (%)  |     |     | 0   |     |      |     |
| Queuing Penalty (veh) |     |     | 0   |     |      |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 576 | 73 | 44  | 337 |
| Average Queue (ft)    | 283 | 44 | 3   | 97  |
| 95th Queue (ft)       | 649 | 77 | 18  | 248 |
| Link Distance (ft)    | 619 |    | 122 | 381 |
| Upstream Blk Time (%) | 15  |    |     | 1   |
| Queuing Penalty (veh) | 0   |    |     | 5   |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 65  | 22 |     |     |
| Queuing Penalty (veh) | 77  | 19 |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LT  | R   | LT  | TR  |
| Maximum Queue (ft)    | 599 | 56  | 143 | 106 |
| Average Queue (ft)    | 552 | 38  | 50  | 9   |
| 95th Queue (ft)       | 607 | 63  | 121 | 65  |
| Link Distance (ft)    | 548 |     | 381 | 202 |
| Upstream Blk Time (%) | 93  |     |     | 0   |
| Queuing Penalty (veh) | 0   |     |     | 2   |
| Storage Bay Dist (ft) |     | 25  |     |     |
| Storage Blk Time (%)  | 65  | 54  |     |     |
| Queuing Penalty (veh) | 89  | 134 |     |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | SB  | SB  |
|-----------------------|-----|-----|-----|----|-----|-----|
| Directions Served     | LT  | R   | LTR | L  | L   | TR  |
| Maximum Queue (ft)    | 27  | 83  | 112 | 67 | 30  | 57  |
| Average Queue (ft)    | 7   | 37  | 37  | 16 | 2   | 3   |
| 95th Queue (ft)       | 25  | 67  | 82  | 46 | 14  | 28  |
| Link Distance (ft)    | 436 |     | 903 |    |     | 249 |
| Upstream Blk Time (%) |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 | 100 |     |
| Storage Blk Time (%)  |     | 0   |     | 0  |     | 0   |
| Queuing Penalty (veh) |     | 0   |     | 0  |     | 0   |

Zone Summary

Zone wide Queuing Penalty: 326

Queuing and Blocking Report  
AM Peak Hour: 2028 Buildout Conditions

06/03/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | NB   | SB  |
|-----------------------|-----|-----|-----|------|-----|
| Directions Served     | LTR | LT  | R   | TR   | L   |
| Maximum Queue (ft)    | 120 | 37  | 46  | 4    | 39  |
| Average Queue (ft)    | 42  | 11  | 19  | 0    | 8   |
| 95th Queue (ft)       | 89  | 34  | 45  | 3    | 29  |
| Link Distance (ft)    | 522 | 678 |     | 3077 |     |
| Upstream Blk Time (%) |     |     |     |      |     |
| Queuing Penalty (veh) |     |     |     |      |     |
| Storage Bay Dist (ft) |     |     | 150 |      | 100 |
| Storage Blk Time (%)  |     |     |     |      |     |
| Queuing Penalty (veh) |     |     |     |      |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 208 | 65 | 31  | 159 |
| Average Queue (ft)    | 123 | 28 | 2   | 50  |
| 95th Queue (ft)       | 481 | 58 | 13  | 121 |
| Link Distance (ft)    | 616 |    | 134 | 372 |
| Upstream Blk Time (%) | 12  |    |     |     |
| Queuing Penalty (veh) | 0   |    |     |     |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 7   | 24 |     |     |
| Queuing Penalty (veh) | 3   | 5  |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB | NB  |
|-----------------------|-----|----|-----|
| Directions Served     | LT  | R  | LT  |
| Maximum Queue (ft)    | 407 | 50 | 93  |
| Average Queue (ft)    | 96  | 37 | 23  |
| 95th Queue (ft)       | 271 | 63 | 67  |
| Link Distance (ft)    | 549 |    | 372 |
| Upstream Blk Time (%) | 0   |    |     |
| Queuing Penalty (veh) | 0   |    |     |
| Storage Bay Dist (ft) |     | 25 |     |
| Storage Blk Time (%)  | 45  | 7  |     |
| Queuing Penalty (veh) | 35  | 11 |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | SB  |
|-----------------------|-----|-----|-----|----|-----|
| Directions Served     | LT  | R   | LTR | L  | L   |
| Maximum Queue (ft)    | 36  | 46  | 74  | 31 | 35  |
| Average Queue (ft)    | 11  | 19  | 30  | 5  | 3   |
| 95th Queue (ft)       | 33  | 44  | 58  | 23 | 18  |
| Link Distance (ft)    | 436 |     | 903 |    |     |
| Upstream Blk Time (%) |     |     |     |    |     |
| Queuing Penalty (veh) |     |     |     |    |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 | 100 |
| Storage Blk Time (%)  |     |     |     |    |     |
| Queuing Penalty (veh) |     |     |     |    |     |

Zone Summary

Zone wide Queuing Penalty: 54

Queuing and Blocking Report  
AM Peak Hour: 2033 Future Conditions

06/03/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | NB   | SB  | SB  |
|-----------------------|-----|-----|-----|------|-----|-----|
| Directions Served     | LTR | LT  | R   | TR   | L   | TR  |
| Maximum Queue (ft)    | 121 | 42  | 42  | 6    | 32  | 6   |
| Average Queue (ft)    | 44  | 10  | 19  | 0    | 8   | 0   |
| 95th Queue (ft)       | 93  | 31  | 43  | 5    | 28  | 3   |
| Link Distance (ft)    | 522 | 678 |     | 3077 |     | 134 |
| Upstream Blk Time (%) |     |     |     |      |     |     |
| Queuing Penalty (veh) |     |     |     |      |     |     |
| Storage Bay Dist (ft) |     |     | 150 |      | 100 |     |
| Storage Blk Time (%)  |     |     |     |      |     |     |
| Queuing Penalty (veh) |     |     |     |      |     |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 424 | 61 | 12  | 192 |
| Average Queue (ft)    | 193 | 26 | 1   | 58  |
| 95th Queue (ft)       | 589 | 55 | 8   | 144 |
| Link Distance (ft)    | 616 |    | 134 | 372 |
| Upstream Blk Time (%) | 15  |    |     |     |
| Queuing Penalty (veh) | 0   |    |     |     |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 45  | 39 |     |     |
| Queuing Penalty (veh) | 17  | 8  |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | LT  | TR  |
| Maximum Queue (ft)    | 421 | 50 | 109 | 2   |
| Average Queue (ft)    | 128 | 38 | 24  | 0   |
| 95th Queue (ft)       | 361 | 64 | 72  | 2   |
| Link Distance (ft)    | 549 |    | 372 | 202 |
| Upstream Blk Time (%) | 2   |    |     |     |
| Queuing Penalty (veh) | 0   |    |     |     |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 55  | 7  |     |     |
| Queuing Penalty (veh) | 46  | 13 |     |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | SB  | SB  |
|-----------------------|-----|-----|-----|----|-----|-----|
| Directions Served     | LT  | R   | LTR | L  | L   | TR  |
| Maximum Queue (ft)    | 49  | 48  | 60  | 31 | 28  | 14  |
| Average Queue (ft)    | 13  | 23  | 28  | 6  | 2   | 1   |
| 95th Queue (ft)       | 37  | 47  | 53  | 26 | 16  | 8   |
| Link Distance (ft)    | 436 |     | 903 |    |     | 249 |
| Upstream Blk Time (%) |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 | 100 |     |
| Storage Blk Time (%)  |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |

Zone Summary

Zone wide Queuing Penalty: 84



Queuing and Blocking Report  
PM Peak Hour: 2033 Future Conditions

06/04/2026

Intersection: 6: S Main Street & Front Street

| Movement              | EB  | WB  | WB  | NB  | NB   | SB  | SB  |
|-----------------------|-----|-----|-----|-----|------|-----|-----|
| Directions Served     | LTR | LT  | R   | L   | TR   | L   | TR  |
| Maximum Queue (ft)    | 242 | 57  | 68  | 38  | 8    | 70  | 1   |
| Average Queue (ft)    | 96  | 21  | 30  | 4   | 0    | 17  | 0   |
| 95th Queue (ft)       | 210 | 48  | 57  | 22  | 4    | 44  | 1   |
| Link Distance (ft)    | 522 | 676 |     |     | 3077 |     | 230 |
| Upstream Blk Time (%) |     |     |     |     |      |     |     |
| Queuing Penalty (veh) |     |     |     |     |      |     |     |
| Storage Bay Dist (ft) |     |     | 150 | 175 |      | 100 |     |
| Storage Blk Time (%)  |     |     |     |     |      | 0   |     |
| Queuing Penalty (veh) |     |     |     |     |      | 0   |     |

Intersection: 7: S Main Street/N Main Street & I-84 EB Off-Ramp/I-84 EB On-Ramp

| Movement              | EB  | EB | NB  | SB  |
|-----------------------|-----|----|-----|-----|
| Directions Served     | LT  | R  | TR  | LT  |
| Maximum Queue (ft)    | 610 | 70 | 49  | 288 |
| Average Queue (ft)    | 415 | 44 | 4   | 108 |
| 95th Queue (ft)       | 825 | 75 | 24  | 249 |
| Link Distance (ft)    | 619 |    | 230 | 272 |
| Upstream Blk Time (%) | 43  |    |     | 2   |
| Queuing Penalty (veh) | 0   |    |     | 14  |
| Storage Bay Dist (ft) |     | 25 |     |     |
| Storage Blk Time (%)  | 74  | 22 |     |     |
| Queuing Penalty (veh) | 94  | 21 |     |     |

Intersection: 8: N Main Street & I-84 Westbound On-Ramp/I-84 WB Off-Ramp

| Movement              | WB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LT  | R   | LT  | TR  |
| Maximum Queue (ft)    | 597 | 52  | 242 | 130 |
| Average Queue (ft)    | 556 | 39  | 70  | 13  |
| 95th Queue (ft)       | 602 | 62  | 180 | 77  |
| Link Distance (ft)    | 548 |     | 272 | 202 |
| Upstream Blk Time (%) | 97  |     | 0   | 0   |
| Queuing Penalty (veh) | 0   |     | 1   | 0   |
| Storage Bay Dist (ft) |     | 25  |     |     |
| Storage Blk Time (%)  | 42  | 60  |     |     |
| Queuing Penalty (veh) | 63  | 160 |     |     |

Intersection: 9: N Main Street & Front Street NW/Front Street NE

| Movement              | EB  | EB  | WB  | NB | SB  | SB  |
|-----------------------|-----|-----|-----|----|-----|-----|
| Directions Served     | LT  | R   | LTR | L  | L   | TR  |
| Maximum Queue (ft)    | 27  | 92  | 87  | 56 | 30  | 22  |
| Average Queue (ft)    | 6   | 41  | 40  | 17 | 3   | 1   |
| 95th Queue (ft)       | 24  | 73  | 75  | 44 | 19  | 10  |
| Link Distance (ft)    | 436 |     | 903 |    |     | 249 |
| Upstream Blk Time (%) |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |    |     |     |
| Storage Bay Dist (ft) |     | 100 |     | 80 | 100 |     |
| Storage Blk Time (%)  |     | 0   |     | 0  |     |     |
| Queuing Penalty (veh) |     | 0   |     | 0  |     |     |

Zone Summary

Zone wide Queuing Penalty: 352