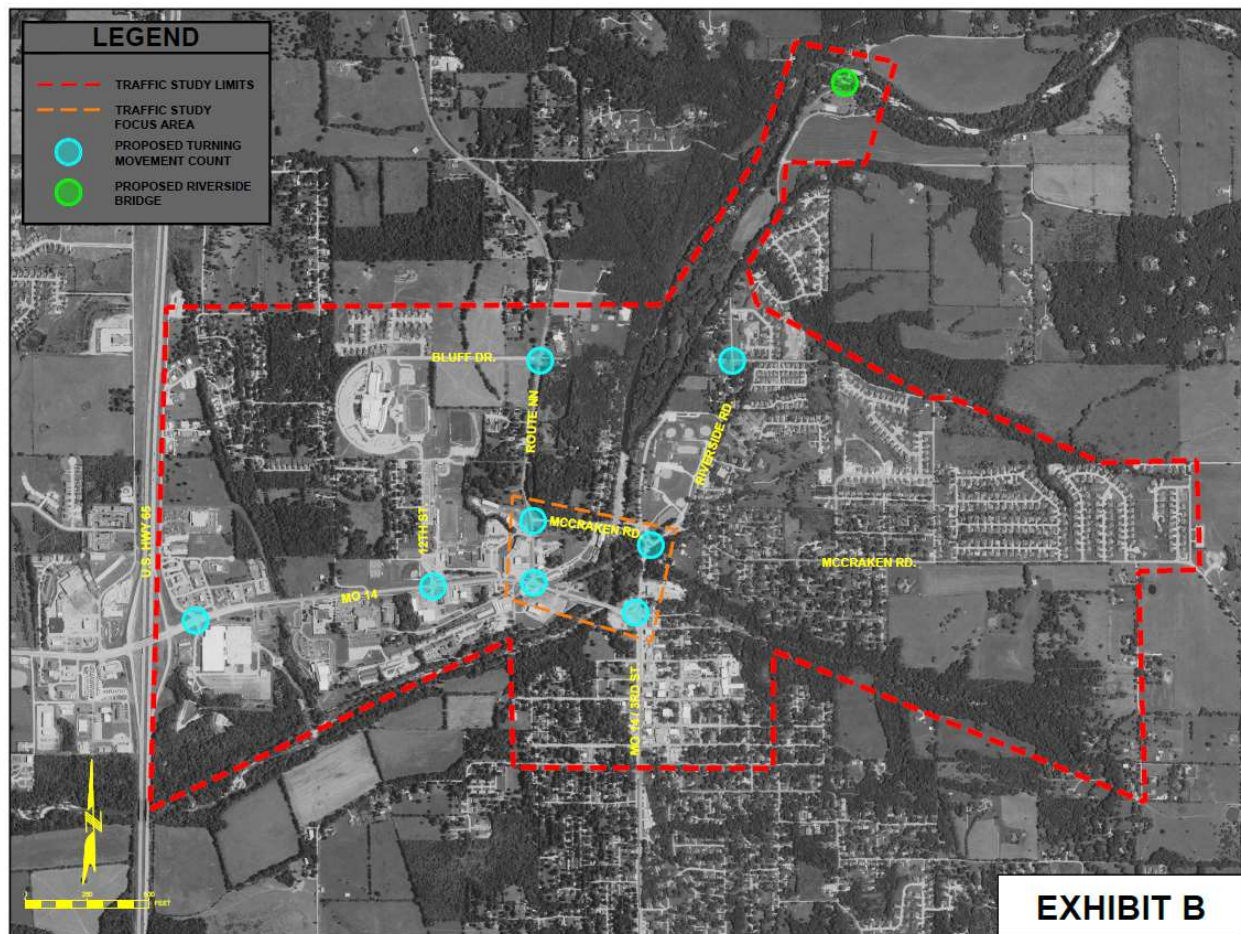




## ADDENDUM 1

## OZARK MILLS TRAFFIC DEVELOPMENT

## TRAFFIC IMPACT STUDY

## OZARK, MISSOURI

PREPARED BY:

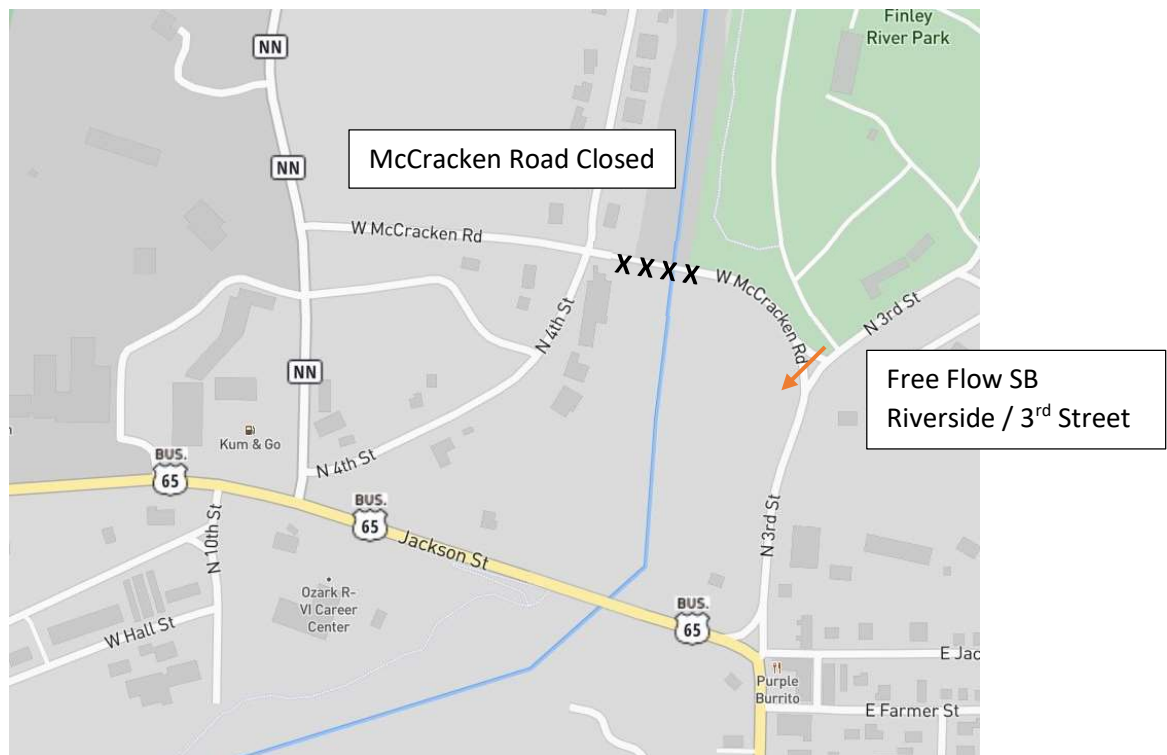
CRAWFORD, MURPHY &amp; TILLY

SEPTEMBER 2020

## Introduction

The City of Ozark, MO tasked CMT with collecting additional traffic counts to supplement the counts obtained during the *Ozark Mills Development Traffic Impact Study* completed in June of 2020. These additional counts were collected at a time when the McCracken Road was closed to through traffic. In addition, traffic simulation models were created using Synchro traffic modelling software to be compared to traffic simulations performed in the previous study. These additional counts provide the City with a unique opportunity to compare the bridge open and closed traffic conditions in order to calibrate estimations used for future scenarios.

These additional traffic counts were collected August 27-29<sup>th</sup>, 2020. McCracken Road was closed at Riverside Road, and traffic was directed south to the Route 14 and 3<sup>rd</sup> Street intersection. The southbound Riverside movement which normally is stop controlled, operated as a free movement for the duration of these counts. No through traffic was allowed between Route NN and Riverside Road during the traffic data collection.



In addition, CMT was able to perform a drone flight during the morning peak hour on August 28, 2020. Images from this flight can be seen below. Additional images and videos have been provided to the City as part of this addendum.

## Traffic Data

The previous counts were collected and subjected to a seasonal adjustment factor due to being collected in February. The additional counts were collected at a time when the COVID-19 pandemic is affecting traffic patterns across the country. Comparison of the raw traffic data from these two separate counts showed that the traffic volumes were similar. For this reason, the same seasonal adjustment

factor was applied to the additional counts taken in August 2020 to better analyze the traffic conditions in the City of Ozark. The raw traffic counts collected are attached. The traffic volumes used in the analyses are included in the original report for the bridge open conditions, and the traffic volumes for the bridge closed conditions are included with this addendum.

The traffic volumes collected and multiplied by the COVID-19 adjustment factor of 1.48 were input into Synchro traffic modelling software to determine the effect that the closure of McCracken Road has on the traffic conditions in Ozark.

The existing signal timings were obtained from the Missouri Department of Transportation (MoDOT). MoDOT currently operates and maintains the signals along Route 14 and Route NN in Ozark, MO. These signal timings were input into the Synchro software to allow for an accurate simulation of the traffic conditions in Ozark.

## Traffic Analysis

For this addendum to the original traffic impact analysis, only the existing conditions were modelled. It is understood that MoDOT is currently working on capacity improvements to Route 14 between Highway 65 and 3<sup>rd</sup> Street in Ozark. This addendum analyzes the conditions as they exist currently, before the capacity improvements have been completed.

The traffic volumes from the bridge open and bridge closed counts were input into Synchro traffic modelling software, along with the current signal timings. The results of the two scenarios are shown in **Table 7** below. The full Synchro analysis reports are included with this addendum.

TABLE 7

|              |              |                                   |    | Scenario    |     |               |     |
|--------------|--------------|-----------------------------------|----|-------------|-----|---------------|-----|
|              |              |                                   |    | Bridge Open |     | Bridge Closed |     |
|              |              |                                   |    | 2020        |     | 2020          |     |
|              |              |                                   |    | Delay (sec) | LOS | Delay (sec)   | LOS |
| Signalized   | Intersection |                                   |    |             |     |               |     |
|              | 1            | MO 14/ 18th Street                | AM | 18.1        | B   | 18.8          | B   |
|              |              |                                   | PM | 27.8        | C   | 28.0          | C   |
|              |              |                                   | WE | 22.4        | C   | 24.9          | C   |
|              | 2            | MO 14/ 12th Street                | AM | 52.5        | D   | 35.8          | C   |
|              |              |                                   | PM | 46.1        | D   | 46.6          | D   |
|              |              |                                   | WE | 18.9        | B   | 20.8          | C   |
|              | 3            | MO 14/9th Street (Rte. NN)        | AM | 27.1        | C   | 61.9          | E   |
|              |              |                                   | PM | 43.6        | D   | 75.2          | E   |
|              |              |                                   | WE | 16.9        | B   | 21.7          | C   |
|              | 4            | MO 14/3rd Street                  | AM | 10.9        | B   | 10.8          | B   |
|              |              |                                   | PM | 14.4        | B   | 21.1          | C   |
|              |              |                                   | WE | 11.6        | B   | 13.4          | B   |
|              | 7            | 9th Street (Rte. NN)/Bluff Drive  | AM | 29.6        | C   | 30.1          | C   |
|              |              |                                   | PM | 29.4        | C   | 30.4          | C   |
|              |              |                                   | WE | 34.5        | C   | 32.6          | C   |
| Unsignalized | 5            | 9th Street (Rte. NN)/McCracken    | AM | 33.4        | D   | 2.2           | A   |
|              |              |                                   | PM | 5.8         | A   | 55.5          | E   |
|              |              |                                   | WE | 4.4         | A   | 1.6           | A   |
|              | 6            | 3rd Street (Riverside)/ McCracken | AM | 19.8        | B   | 0.0           | A   |
|              |              |                                   | PM | 65.4        | F   | 0.0           | A   |
|              |              |                                   | WE | 15.1        | C   | 0.0           | A   |
|              | 8            | Riverside/ Country Crest          | AM | 4.0         | A   | 3.7           | A   |
|              |              |                                   | PM | 1.6         | A   | 1.7           | A   |
|              |              |                                   | WE | 2.1         | A   | 2.2           | A   |

The comparison of the capacity analyses shows that closing the bridge, and McCracken Road has a negative effect on the intersections along Route 14. While this can be expected, the analysis shows that the Route 14/Route NN signalized intersection sees the most severe impact with AM and PM peak conditions falling to Level of Service E. The drone flight footage shows traffic backups along northbound 3<sup>rd</sup> Street of approximately 2,000 feet to Oak Street, and backups along southbound Riverside Road of approximately 1,400 feet to E. McCracken Road.



Looking southbound on 3<sup>rd</sup> Street during the AM peak hour:



Traffic queues along Riverside Road, north of Route 14:



While the Synchro analysis shows that the Route 14/3<sup>rd</sup> Street intersection operates at an acceptable LOS, the delay at Route 14/Route NN causes lengthy queueing of vehicles on northbound 3<sup>rd</sup> Street and

southbound Riverside Road. Traffic that would utilize McCracken road is forced to use the Route 14/Route NN intersection.

The Synchro queue length analysis can be seen in **Table 8** below. The full Synchro Queue reports have been included with this addendum.

**TABLE 8**

|            |              |                                  | 95th Percentile Queue Length (ft) |                    |       |               |       |       |       |    |
|------------|--------------|----------------------------------|-----------------------------------|--------------------|-------|---------------|-------|-------|-------|----|
|            |              |                                  | Bridge Open                       |                    |       | Bridge Closed |       |       |       |    |
|            |              |                                  | 2020                              |                    |       | 2020          |       |       |       |    |
|            |              |                                  | AM                                | PM                 | WE    | AM            | PM    | WE    |       |    |
| Signalized | Intersection |                                  |                                   | EBL                | 120   | 186           | 183   | 127   | 175   | 81 |
|            | 1            | MO 14/ 18th Street               | EBT                               | 280                | 632*  | 205           | 256   | 516*  | 77    |    |
|            |              |                                  | WBL                               | --                 | 6     | --            | --    | 6     | 1     |    |
|            |              |                                  | WBT                               | 272                | 332   | 285           | 242   | 295   | 169   |    |
|            |              |                                  | NBL                               | 11                 | 88*   | 6             | 11    | 43    | 1     |    |
|            |              |                                  | NBT                               | --                 | 0     | 71            | --    | 8     | 0     |    |
|            |              |                                  | SBL                               | 41                 | 96    | --            | 21    | 84    | 24    |    |
|            |              |                                  | SBT                               | 0                  | 0     | 0             | 0     | 0     | 0     |    |
|            |              |                                  | 2                                 | MO 14/ 12th Street | EBL   | 623*          | 31    | 16    | 346*  | 35 |
|            | EBT          | 349                              |                                   |                    | 1596* | 531           | 397   | 1441* | 365   |    |
|            | WBL          | 6                                |                                   |                    | 51    | 12            | 7     | 59    | 11    |    |
|            | WBT          | 1034*                            |                                   |                    | 824   | 554           | 790*  | 823   | 485*  |    |
|            | WBR          | 84                               |                                   |                    | 5     | 0             | 75    | 32    | 0     |    |
|            | NBL          | 51                               |                                   |                    | 167*  | 58            | 41    | 151*  | 38    |    |
|            | NBT          | 42                               |                                   |                    | 57    | 47            | 46    | 66    | 34    |    |
|            | SBL          | 201*                             |                                   |                    | 165*  | 40            | 199*  | 277*  | 31    |    |
|            | SBT          | 57                               | 68                                | 42                 | 71    | 77            | 25    |       |       |    |
|            | 3            | MO 14/9th Street (Rte. NN)       | EBL                               | 316*               | 340*  | 103           | 324*  | 357*  | 120*  |    |
|            |              |                                  | EBT                               | 190                | 1062  | 258           | 236   | 1334* | 212   |    |
|            |              |                                  | WBT                               | 1517*              | 1403* | 850*          | 2180* | 1865* | 1389* |    |
|            |              |                                  | SBL                               | 439*               | 549*  | 231           | 668*  | 790*  | 455*  |    |
|            |              |                                  | SBR                               | 195                | 783   | 68            | 157   | 138   | 57    |    |
|            | 4            | MO 14/3rd Street                 | EBL                               | 97                 | 330   | 150           | 197   | 698*  | 241   |    |
|            |              |                                  | EBT                               | 107                | 150   | 80            | 204   | 164   | 78    |    |
|            |              |                                  | WBT                               | 240                | 363   | 203           | 419   | 499*  | 292   |    |
|            |              |                                  | WBT                               | 108                | 145   | 83            | 99    | 189   | 91    |    |
|            |              |                                  | SBL                               | 57                 | 77    | 48            | 32    | 48    | 47    |    |
|            |              |                                  | SBR                               | 73                 | 66    | 59            | 260   | 100   | 85    |    |
|            | 7            | 9th Street (Rte. NN)/Bluff Drive | EBL                               | 169*               | 190   | 19            | 188*  | 237*  | 17    |    |
|            |              |                                  | EBT                               | 36                 | 11    | 0             | 0     | 0     | 0     |    |
|            |              |                                  | WBT                               | 8                  | 11    | 10            | 12    | 0     | --    |    |
|            |              |                                  | NBL                               | 85                 | 15    | 14            | 71    | 17    | 4     |    |
|            |              |                                  | NBT                               | 693*               | 298   | 291*          | 388*  | 364*  | 310*  |    |
|            |              |                                  | SBL                               | 4                  | --    | 2             | --    | --    | --    |    |
|            |              |                                  | SBT                               | 351                | 443*  | 316*          | 447*  | 475*  | 239*  |    |
|            |              |                                  | SBR                               | 94                 | 0     | 0             | 53    | 0     | 0     |    |

\* 95th percentile volume exceeds capacity, queue may be longer

Queue shown is maximum after two cycles

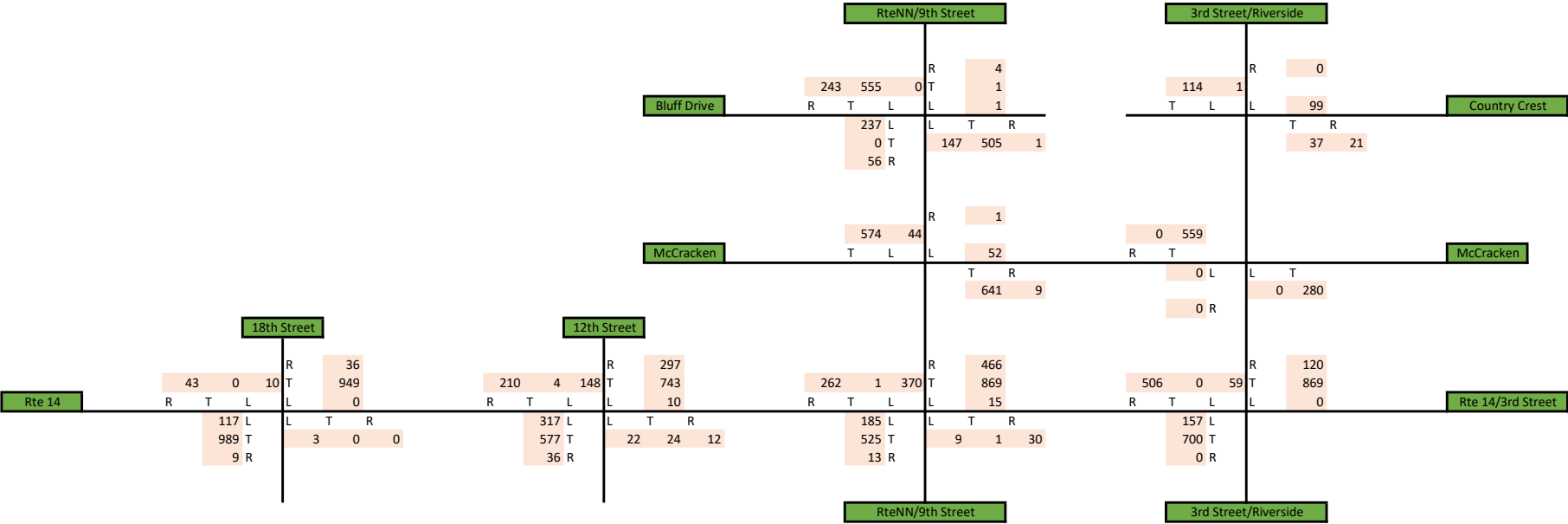
The queue length analysis shows that the bridge closed queues are significantly larger at the Route 14/Route NN intersection and the Route 14/3<sup>rd</sup> Street intersection. The analysis also shows that the existing volumes currently exceed the capacity of the intersection, with the additional detoured traffic increasing the capacity concerns.

## Conclusions

This traffic analysis was meant to compare the traffic conditions with the McCracken Road bridge open and closed. The analysis shows that the closure of the McCracken Road bridge creates capacity issues at the intersections along Route 14, and queueing along both 3<sup>rd</sup> Street and Riverside Road. As concluded in the previous report, the closure of McCracken Road to thru traffic will have adverse impacts on the roadway network in Ozark, MO. The analysis shows that McCracken road should remain open to thru traffic in some configuration, whether one-way or two-way traffic is allowed.

2020 AM Peak Hour Traffic Counts w/ McCracken Bridge Closed

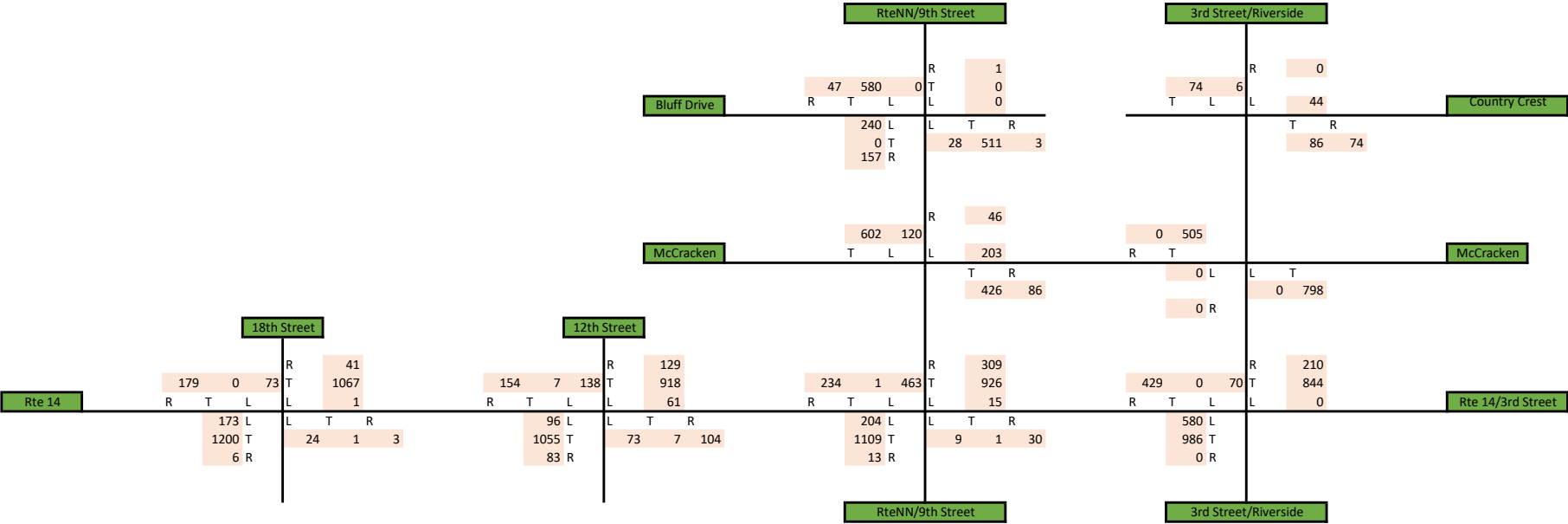
COVID Factor      1.48





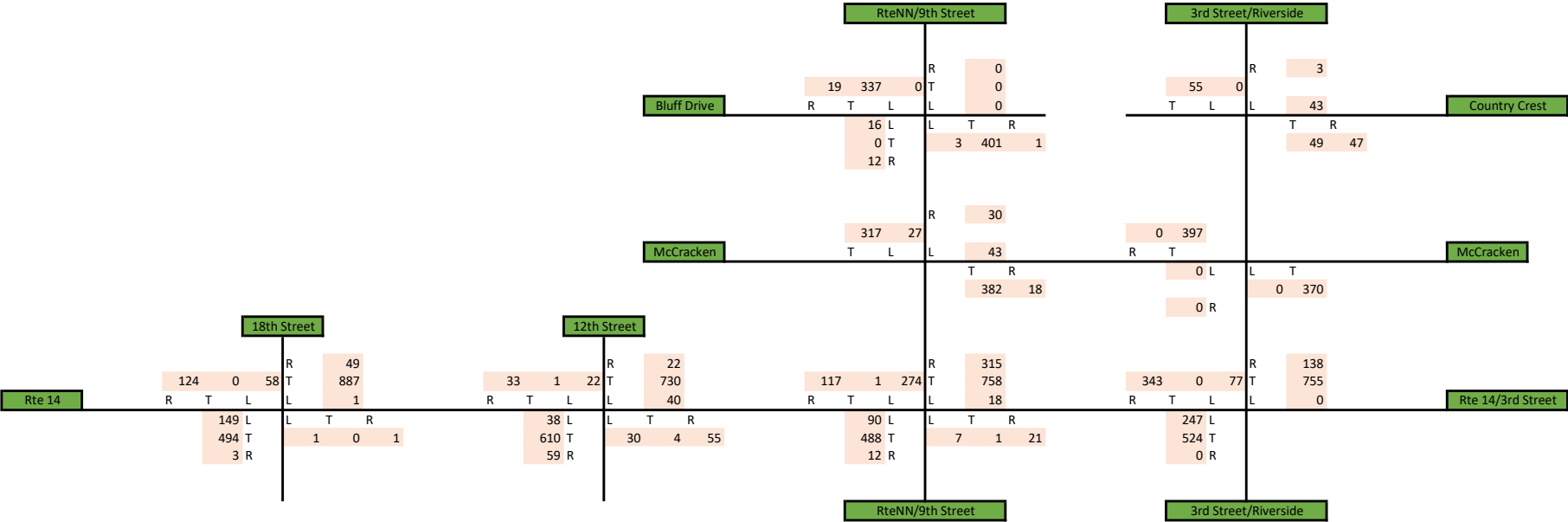
2020 PM Peak Hour Traffic Counts w/ McCracken Bridge Closed

COVID Factor      1.48



2020 WE Peak Hour Traffic Counts w/ McCracken Bridge Closed

COVID Factor      1.48



# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Open AM  
09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 104                                                                               | 1051                                                                              | 13                                                                                | 0                                                                                 | 1077                                                                              | 43                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 28                                                                                  | 0                                                                                   | 46                                                                                  |
| Future Volume (veh/h)                                                                              | 104                                                                               | 1051                                                                              | 13                                                                                | 0                                                                                 | 1077                                                                              | 43                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 28                                                                                  | 0                                                                                   | 46                                                                                  |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 113                                                                               | 1142                                                                              | 14                                                                                | 0                                                                                 | 1171                                                                              | 47                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 30                                                                                  | 0                                                                                   | 50                                                                                  |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 156                                                                               | 1880                                                                              | 23                                                                                | 3                                                                                 | 1739                                                                              | 70                                                                                | 80                                                                                  | 546                                                                                 | 0                                                                                   | 316                                                                                 | 0                                                                                   | 240                                                                                 |
| Arrive On Green                                                                                    | 0.09                                                                              | 0.52                                                                              | 0.52                                                                              | 0.00                                                                              | 0.35                                                                              | 0.35                                                                              | 0.04                                                                                | 0.00                                                                                | 0.00                                                                                | 0.15                                                                                | 0.00                                                                                | 0.15                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3595                                                                              | 44                                                                                | 1781                                                                              | 5036                                                                              | 202                                                                               | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 113                                                                               | 564                                                                               | 592                                                                               | 0                                                                                 | 791                                                                               | 427                                                                               | 3                                                                                   | 0                                                                                   | 0                                                                                   | 30                                                                                  | 0                                                                                   | 50                                                                                  |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1862                                                                              | 1781                                                                              | 1702                                                                              | 1834                                                                              | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 4.4                                                                               | 15.8                                                                              | 15.8                                                                              | 0.0                                                                               | 14.1                                                                              | 14.1                                                                              | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.3                                                                                 | 0.0                                                                                 | 2.0                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 4.4                                                                               | 15.8                                                                              | 15.8                                                                              | 0.0                                                                               | 14.1                                                                              | 14.1                                                                              | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.3                                                                                 | 0.0                                                                                 | 2.0                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.02                                                                              | 1.00                                                                              |                                                                                   | 0.11                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 156                                                                               | 929                                                                               | 974                                                                               | 3                                                                                 | 1175                                                                              | 633                                                                               | 80                                                                                  | 546                                                                                 | 0                                                                                   | 316                                                                                 | 0                                                                                   | 240                                                                                 |
| V/C Ratio(X)                                                                                       | 0.72                                                                              | 0.61                                                                              | 0.61                                                                              | 0.00                                                                              | 0.67                                                                              | 0.67                                                                              | 0.04                                                                                | 0.00                                                                                | 0.00                                                                                | 0.09                                                                                | 0.00                                                                                | 0.21                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 340                                                                               | 1062                                                                              | 1114                                                                              | 175                                                                               | 1720                                                                              | 927                                                                               | 80                                                                                  | 546                                                                                 | 0                                                                                   | 316                                                                                 | 0                                                                                   | 240                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 31.7                                                                              | 11.9                                                                              | 11.9                                                                              | 0.0                                                                               | 19.9                                                                              | 19.9                                                                              | 32.6                                                                                | 0.0                                                                                 | 0.0                                                                                 | 26.2                                                                                | 0.0                                                                                 | 26.5                                                                                |
| Incr Delay (d2), s/veh                                                                             | 6.2                                                                               | 0.8                                                                               | 0.8                                                                               | 0.0                                                                               | 0.7                                                                               | 1.3                                                                               | 0.2                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.6                                                                                 | 0.0                                                                                 | 2.0                                                                                 |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 2.1                                                                               | 5.6                                                                               | 5.9                                                                               | 0.0                                                                               | 5.3                                                                               | 5.8                                                                               | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.5                                                                                 | 0.0                                                                                 | 0.8                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 37.8                                                                              | 12.7                                                                              | 12.6                                                                              | 0.0                                                                               | 20.6                                                                              | 21.2                                                                              | 32.7                                                                                | 0.0                                                                                 | 0.0                                                                                 | 26.8                                                                                | 0.0                                                                                 | 28.4                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 | C                                                                                 | C                                                                                 | C                                                                                   | A                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   |
| Approach Vol, veh/h                                                                                | 1269                                                                              |                                                                                   |                                                                                   |                                                                                   | 1218                                                                              |                                                                                   |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                                                              | 14.9                                                                              |                                                                                   |                                                                                   |                                                                                   | 20.8                                                                              |                                                                                   |                                                                                     |                                                                                     | 32.7                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Approach LOS                                                                                       | B                                                                                 |                                                                                   |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 |                                                                                   | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 27.6                                                                              |                                                                                   | 12.7                                                                              | 31.0                                                                              | 10.0                                                                              | 17.6                                                                              | 0.0                                                                                 | 43.7                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             |                                                                                   | * 6.4                                                                             | * 6.4                                                                             | * 6.8                                                                             | * 6.8                                                                             | * 6.4                                                                               | * 6.4                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 21                                                                              |                                                                                   | * 14                                                                              | * 36                                                                              | * 3.2                                                                             | * 11                                                                              | * 7                                                                                 | * 43                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                                                       | 0.0                                                                               |                                                                                   | 6.4                                                                               | 16.1                                                                              | 2.1                                                                               | 4.0                                                                               | 0.0                                                                                 | 17.8                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               |                                                                                   | 0.1                                                                               | 8.5                                                                               | 0.0                                                                               | 0.1                                                                               | 0.0                                                                                 | 8.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 18.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

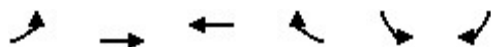
2020 Bridge Open AM  
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|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 494                                                                               | 645                                                                               | 21                                                                                | 10                                                                                | 875                                                                               | 228                                                                               | 25                                                                                  | 15                                                                                  | 13                                                                                  | 102                                                                                 | 6                                                                                   | 77                                                                                  |
| Future Volume (veh/h)        | 494                                                                               | 645                                                                               | 21                                                                                | 10                                                                                | 875                                                                               | 228                                                                               | 25                                                                                  | 15                                                                                  | 13                                                                                  | 102                                                                                 | 6                                                                                   | 77                                                                                  |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 537                                                                               | 701                                                                               | 23                                                                                | 11                                                                                | 951                                                                               | 248                                                                               | 27                                                                                  | 16                                                                                  | 14                                                                                  | 111                                                                                 | 7                                                                                   | 84                                                                                  |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 511                                                                               | 1248                                                                              | 41                                                                                | 527                                                                               | 932                                                                               | 790                                                                               | 103                                                                                 | 81                                                                                  | 70                                                                                  | 158                                                                                 | 11                                                                                  | 130                                                                                 |
| Arrive On Green              | 0.25                                                                              | 0.69                                                                              | 0.69                                                                              | 0.06                                                                              | 0.50                                                                              | 0.50                                                                              | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 1801                                                                              | 59                                                                                | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1306                                                                                | 920                                                                                 | 805                                                                                 | 1380                                                                                | 123                                                                                 | 1480                                                                                |
| Grp Volume(v), veh/h         | 537                                                                               | 0                                                                                 | 724                                                                               | 11                                                                                | 951                                                                               | 248                                                                               | 27                                                                                  | 0                                                                                   | 30                                                                                  | 111                                                                                 | 0                                                                                   | 91                                                                                  |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1860                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1306                                                                                | 0                                                                                   | 1725                                                                                | 1380                                                                                | 0                                                                                   | 1604                                                                                |
| Q Serve(g_s), s              | 30.4                                                                              | 0.0                                                                               | 23.5                                                                              | 0.3                                                                               | 59.8                                                                              | 11.2                                                                              | 2.5                                                                                 | 0.0                                                                                 | 1.9                                                                                 | 8.6                                                                                 | 0.0                                                                                 | 6.6                                                                                 |
| Cycle Q Clear(g_c), s        | 30.4                                                                              | 0.0                                                                               | 23.5                                                                              | 0.3                                                                               | 59.8                                                                              | 11.2                                                                              | 9.0                                                                                 | 0.0                                                                                 | 1.9                                                                                 | 10.5                                                                                | 0.0                                                                                 | 6.6                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 0.03                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.47                                                                                | 1.00                                                                                |                                                                                     | 0.92                                                                                |
| Lane Grp Cap(c), veh/h       | 511                                                                               | 0                                                                                 | 1289                                                                              | 527                                                                               | 932                                                                               | 790                                                                               | 103                                                                                 | 0                                                                                   | 151                                                                                 | 158                                                                                 | 0                                                                                   | 140                                                                                 |
| V/C Ratio(X)                 | 1.05                                                                              | 0.00                                                                              | 0.56                                                                              | 0.02                                                                              | 1.02                                                                              | 0.31                                                                              | 0.26                                                                                | 0.00                                                                                | 0.20                                                                                | 0.70                                                                                | 0.00                                                                                | 0.65                                                                                |
| Avail Cap(c_a), veh/h        | 511                                                                               | 0                                                                                 | 1289                                                                              | 527                                                                               | 932                                                                               | 790                                                                               | 103                                                                                 | 0                                                                                   | 151                                                                                 | 158                                                                                 | 0                                                                                   | 140                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 39.8                                                                              | 0.0                                                                               | 9.2                                                                               | 11.9                                                                              | 30.1                                                                              | 17.9                                                                              | 57.3                                                                                | 0.0                                                                                 | 50.8                                                                                | 56.2                                                                                | 0.0                                                                                 | 53.0                                                                                |
| Incr Delay (d2), s/veh       | 53.7                                                                              | 0.0                                                                               | 1.8                                                                               | 0.1                                                                               | 34.7                                                                              | 1.0                                                                               | 6.2                                                                                 | 0.0                                                                                 | 2.9                                                                                 | 22.7                                                                                | 0.0                                                                                 | 20.9                                                                                |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 22.6                                                                              | 0.0                                                                               | 9.3                                                                               | 0.1                                                                               | 34.7                                                                              | 4.3                                                                               | 1.0                                                                                 | 0.0                                                                                 | 1.0                                                                                 | 4.4                                                                                 | 0.0                                                                                 | 3.5                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 93.4                                                                              | 0.0                                                                               | 11.0                                                                              | 11.9                                                                              | 64.8                                                                              | 18.9                                                                              | 63.5                                                                                | 0.0                                                                                 | 53.8                                                                                | 78.9                                                                                | 0.0                                                                                 | 73.9                                                                                |
| LnGrp LOS                    | F                                                                                 | A                                                                                 | B                                                                                 | B                                                                                 | F                                                                                 | B                                                                                 | E                                                                                   | A                                                                                   | D                                                                                   | E                                                                                   | A                                                                                   | E                                                                                   |
| Approach Vol, veh/h          | 1261                                                                              |                                                                                   | 1210                                                                              |                                                                                   |                                                                                   |                                                                                   | 57                                                                                  |                                                                                     | 202                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 46.1                                                                              |                                                                                   | 54.9                                                                              |                                                                                   |                                                                                   |                                                                                   | 58.4                                                                                |                                                                                     | 76.7                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   | D                                                                                 |                                                                                   |                                                                                   |                                                                                   | E                                                                                   |                                                                                     | E                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 2                                                                                 |                                                                                   | 3                                                                                 |                                                                                   | 4                                                                                 |                                                                                   | 6                                                                                   |                                                                                     | 7                                                                                   |                                                                                     | 8                                                                                   |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 16.6                                                                              |                                                                                   | 37.0                                                                              |                                                                                   | 66.4                                                                              |                                                                                   | 16.6                                                                                |                                                                                     | 13.6                                                                                |                                                                                     | 89.8                                                                                |                                                                                     |
| Change Period (Y+Rc), s      | 6.1                                                                               |                                                                                   | 6.6                                                                               |                                                                                   | 6.6                                                                               |                                                                                   | 6.1                                                                                 |                                                                                     | 6.6                                                                                 |                                                                                     | 6.6                                                                                 |                                                                                     |
| Max Green Setting (Gmax), s  | 10.5                                                                              |                                                                                   | 30.4                                                                              |                                                                                   | 59.8                                                                              |                                                                                   | 10.5                                                                                |                                                                                     | 7.0                                                                                 |                                                                                     | 83.2                                                                                |                                                                                     |
| Max Q Clear Time (g_c+l1), s | 11.0                                                                              |                                                                                   | 32.4                                                                              |                                                                                   | 61.8                                                                              |                                                                                   | 12.5                                                                                |                                                                                     | 2.3                                                                                 |                                                                                     | 25.5                                                                                |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |                                                                                     | 6.4                                                                                 |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay           |                                                                                   |                                                                                   | 52.5                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                  |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Open AM  
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| Movement                     | EBL  | EBT  | WBT  | WBR  | SBL  | SBR     |
|------------------------------|------|------|------|------|------|---------|
| Lane Configurations          |      |      |      |      |      |         |
| Traffic Volume (veh/h)       | 197  | 482  | 855  | 262  | 253  | 329     |
| Future Volume (veh/h)        | 197  | 482  | 855  | 262  | 253  | 329     |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0       |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |      | 1.00 | 1.00 | 1.00    |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00    |
| Work Zone On Approach        |      | No   | No   |      | No   |         |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870    |
| Adj Flow Rate, veh/h         | 214  | 524  | 929  | 0    | 275  | 0       |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92    |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2       |
| Cap, veh/h                   | 256  | 1301 | 1038 |      | 311  |         |
| Arrive On Green              | 0.07 | 0.70 | 0.56 | 0.00 | 0.17 | 0.00    |
| Sat Flow, veh/h              | 1781 | 1870 | 1870 | 0    | 1781 | 1585    |
| Grp Volume(v), veh/h         | 214  | 524  | 929  | 0    | 275  | 0       |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1870 | 1870 | 0    | 1781 | 1585    |
| Q Serve(g_s), s              | 4.3  | 11.7 | 43.4 | 0.0  | 14.9 | 0.0     |
| Cycle Q Clear(g_c), s        | 4.3  | 11.7 | 43.4 | 0.0  | 14.9 | 0.0     |
| Prop In Lane                 | 1.00 |      |      | 0.00 | 1.00 | 1.00    |
| Lane Grp Cap(c), veh/h       | 256  | 1301 | 1038 |      | 311  |         |
| V/C Ratio(X)                 | 0.83 | 0.40 | 0.89 |      | 0.88 |         |
| Avail Cap(c_a), veh/h        | 367  | 2012 | 1612 |      | 399  |         |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00    |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00    |
| Uniform Delay (d), s/veh     | 42.0 | 6.4  | 19.4 | 0.0  | 39.8 | 0.0     |
| Incr Delay (d2), s/veh       | 10.7 | 0.2  | 4.5  | 0.0  | 17.0 | 0.0     |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0     |
| %ile BackOfQ(50%),veh/ln     | 5.8  | 4.0  | 18.5 | 0.0  | 7.9  | 0.0     |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |         |
| LnGrp Delay(d),s/veh         | 52.8 | 6.6  | 23.9 | 0.0  | 56.8 | 0.0     |
| LnGrp LOS                    | D    | A    | C    |      | E    |         |
| Approach Vol, veh/h          |      | 738  | 929  | A    | 275  | A       |
| Approach Delay, s/veh        |      | 20.0 | 23.9 |      | 56.8 |         |
| Approach LOS                 |      | B    | C    |      | E    |         |
| Timer - Assigned Phs         |      |      | 3    | 4    | 6    | 8       |
| Phs Duration (G+Y+Rc), s     |      |      | 13.9 | 61.7 | 23.1 | 75.6    |
| Change Period (Y+Rc), s      |      |      | 6.9  | 6.9  | 5.9  | * 6.9   |
| Max Green Setting (Gmax), s  |      |      | 13.1 | 85.1 | 22.1 | * 1.1E2 |
| Max Q Clear Time (g_c+I1), s |      |      | 6.3  | 45.4 | 16.9 | 13.7    |
| Green Ext Time (p_c), s      |      |      | 0.3  | 9.4  | 0.4  | 4.0     |
| <b>Intersection Summary</b>  |      |      |      |      |      |         |
| HCM 6th Ctrl Delay           |      |      | 27.1 |      |      |         |
| HCM 6th LOS                  |      |      | C    |      |      |         |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

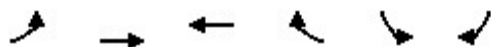
Unsignalized Delay for [EBT, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Open AM  
09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 90   | 730  | 797   | 223   | 115  | 299   |
| Future Volume (veh/h)        | 90   | 730  | 797   | 223   | 115  | 299   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 98   | 793  | 866   | 0     | 125  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 237  | 2307 | 1343  |       | 385  |       |
| Arrive On Green              | 0.13 | 0.65 | 0.38  | 0.00  | 0.11 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 98   | 793  | 866   | 0     | 125  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 2.7  | 5.3  | 10.6  | 0.0   | 1.8  | 0.0   |
| Cycle Q Clear(g_c), s        | 2.7  | 5.3  | 10.6  | 0.0   | 1.8  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 237  | 2307 | 1343  |       | 385  |       |
| V/C Ratio(X)                 | 0.41 | 0.34 | 0.64  |       | 0.32 |       |
| Avail Cap(c_a), veh/h        | 565  | 4904 | 3285  |       | 2276 |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 21.0 | 4.2  | 13.5  | 0.0   | 21.6 | 0.0   |
| Incr Delay (d2), s/veh       | 1.2  | 0.1  | 0.5   | 0.0   | 0.5  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 1.1  | 1.2  | 3.7   | 0.0   | 0.7  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 22.1 | 4.3  | 14.0  | 0.0   | 22.1 | 0.0   |
| LnGrp LOS                    | C    | A    | B     |       | C    |       |
| Approach Vol, veh/h          |      | 891  | 866   | A     | 125  | A     |
| Approach Delay, s/veh        |      | 6.2  | 14.0  |       | 22.1 |       |
| Approach LOS                 |      | A    | B     |       | C    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 14.3  | 27.2  | 11.2 | 41.5  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 17  | * 49  | 34.7 | * 73  |
| Max Q Clear Time (g_c+I1), s |      |      | 4.7   | 12.6  | 3.8  | 7.3   |
| Green Ext Time (p_c), s      |      |      | 0.2   | 7.3   | 0.4  | 6.9   |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 10.9  |       |      |       |
| HCM 6th LOS                  |      |      | B     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Open AM  
09/25/2020

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 160                                                                               | 1                                                                                 | 73                                                                                | 0                                                                                 | 1                                                                                 | 1                                                                                 | 215                                                                                 | 770                                                                                 | 1                                                                                   | 3                                                                                   | 524                                                                                 | 323                                                                                 |
| Future Volume (veh/h)        | 160                                                                               | 1                                                                                 | 73                                                                                | 0                                                                                 | 1                                                                                 | 1                                                                                 | 215                                                                                 | 770                                                                                 | 1                                                                                   | 3                                                                                   | 524                                                                                 | 323                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 174                                                                               | 1                                                                                 | 79                                                                                | 0                                                                                 | 1                                                                                 | 1                                                                                 | 234                                                                                 | 837                                                                                 | 1                                                                                   | 3                                                                                   | 570                                                                                 | 351                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 327                                                                               | 5                                                                                 | 357                                                                               | 0                                                                                 | 67                                                                                | 67                                                                                | 375                                                                                 | 892                                                                                 | 1                                                                                   | 254                                                                                 | 883                                                                                 | 748                                                                                 |
| Arrive On Green              | 0.08                                                                              | 0.23                                                                              | 0.23                                                                              | 0.00                                                                              | 0.08                                                                              | 0.08                                                                              | 0.08                                                                                | 0.48                                                                                | 0.48                                                                                | 0.08                                                                                | 0.47                                                                                | 0.47                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 20                                                                                | 1568                                                                              | 0                                                                                 | 858                                                                               | 858                                                                               | 1781                                                                                | 1868                                                                                | 2                                                                                   | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Grp Volume(v), veh/h         | 174                                                                               | 0                                                                                 | 80                                                                                | 0                                                                                 | 0                                                                                 | 2                                                                                 | 234                                                                                 | 0                                                                                   | 838                                                                                 | 3                                                                                   | 570                                                                                 | 351                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1588                                                                              | 0                                                                                 | 0                                                                                 | 1716                                                                              | 1781                                                                                | 0                                                                                   | 1870                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Q Serve(g_s), s              | 7.0                                                                               | 0.0                                                                               | 3.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.1                                                                               | 6.0                                                                                 | 0.0                                                                                 | 38.2                                                                                | 0.1                                                                                 | 20.8                                                                                | 13.5                                                                                |
| Cycle Q Clear(g_c), s        | 7.0                                                                               | 0.0                                                                               | 3.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.1                                                                               | 6.0                                                                                 | 0.0                                                                                 | 38.2                                                                                | 0.1                                                                                 | 20.8                                                                                | 13.5                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 0.99                                                                              | 0.00                                                                              |                                                                                   | 0.50                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h       | 327                                                                               | 0                                                                                 | 362                                                                               | 0                                                                                 | 0                                                                                 | 133                                                                               | 375                                                                                 | 0                                                                                   | 893                                                                                 | 254                                                                                 | 883                                                                                 | 748                                                                                 |
| V/C Ratio(X)                 | 0.53                                                                              | 0.00                                                                              | 0.22                                                                              | 0.00                                                                              | 0.00                                                                              | 0.01                                                                              | 0.62                                                                                | 0.00                                                                                | 0.94                                                                                | 0.01                                                                                | 0.65                                                                                | 0.47                                                                                |
| Avail Cap(c_a), veh/h        | 327                                                                               | 0                                                                                 | 362                                                                               | 0                                                                                 | 0                                                                                 | 133                                                                               | 375                                                                                 | 0                                                                                   | 893                                                                                 | 254                                                                                 | 883                                                                                 | 748                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 34.0                                                                              | 0.0                                                                               | 28.3                                                                              | 0.0                                                                               | 0.0                                                                               | 38.3                                                                              | 14.2                                                                                | 0.0                                                                                 | 22.2                                                                                | 17.0                                                                                | 18.0                                                                                | 16.1                                                                                |
| Incr Delay (d2), s/veh       | 1.7                                                                               | 0.0                                                                               | 1.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 7.6                                                                                 | 0.0                                                                                 | 18.4                                                                                | 0.1                                                                                 | 3.6                                                                                 | 2.1                                                                                 |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 3.5                                                                               | 0.0                                                                               | 1.5                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 3.0                                                                                 | 0.0                                                                                 | 20.0                                                                                | 0.0                                                                                 | 9.3                                                                                 | 5.1                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 35.7                                                                              | 0.0                                                                               | 29.7                                                                              | 0.0                                                                               | 0.0                                                                               | 38.4                                                                              | 21.8                                                                                | 0.0                                                                                 | 40.6                                                                                | 17.1                                                                                | 21.7                                                                                | 18.2                                                                                |
| LnGrp LOS                    | D                                                                                 | A                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | D                                                                                 | C                                                                                   | A                                                                                   | D                                                                                   | B                                                                                   | C                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 254                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     | 1072                                                                                |                                                                                     | 924                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 33.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 38.4                                                                              |                                                                                     | 36.5                                                                                |                                                                                     | 20.3                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | D                                                                                 |                                                                                     | D                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 13.5                                                                              | 49.5                                                                              | 13.5                                                                              | 13.5                                                                              | 14.0                                                                              | 49.0                                                                              | 27.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | * 7                                                                               | * 43                                                                              | 7.0                                                                               | 7.0                                                                               | * 7.5                                                                             | * 43                                                                              | 20.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 2.1                                                                               | 40.2                                                                              | 9.0                                                                               | 2.1                                                                               | 8.0                                                                               | 22.8                                                                              | 5.7                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 1.6                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 5.1                                                                               | 0.3                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 29.6 |
| HCM 6th LOS        | C    |

### Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection               |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh           | 33.4                                                                              |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Movement                   | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                        | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                            |  |  |
| Traffic Vol, veh/h         | 144                                                                               | 548                                                                               | 448                                                                               | 40                         | 93                                                                                | 481                                                                               |
| Future Vol, veh/h          | 144                                                                               | 548                                                                               | 448                                                                               | 40                         | 93                                                                                | 481                                                                               |
| Conflicting Peds, #/hr     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                          | 0                                                                                 | 0                                                                                 |
| Sign Control               | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                       | Free                                                                              | Free                                                                              |
| RT Channelized             | -                                                                                 | None                                                                              | -                                                                                 | None                       | -                                                                                 | None                                                                              |
| Storage Length             | 0                                                                                 | 175                                                                               | -                                                                                 | -                          | 250                                                                               | -                                                                                 |
| Veh in Median Storage, #   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Grade, %                   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Peak Hour Factor           | 92                                                                                | 92                                                                                | 92                                                                                | 92                         | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                          | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                  | 157                                                                               | 596                                                                               | 487                                                                               | 43                         | 101                                                                               | 523                                                                               |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Major/Minor                | Minor1                                                                            | Major1                                                                            |                                                                                   | Major2                     |                                                                                   |                                                                                   |
| Conflicting Flow All       | 1234                                                                              | 509                                                                               | 0                                                                                 | 0                          | 530                                                                               | 0                                                                                 |
| Stage 1                    | 509                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 725                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy              | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -                          | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Follow-up Hdwy             | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -                          | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver         | 195                                                                               | ~ 564                                                                             | -                                                                                 | -                          | 1037                                                                              | -                                                                                 |
| Stage 1                    | 604                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 479                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Platoon blocked, %         |                                                                                   |                                                                                   | -                                                                                 | -                          |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver         | 176                                                                               | ~ 564                                                                             | -                                                                                 | -                          | 1037                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver         | 176                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 1                    | 604                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 433                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Approach                   | WB                                                                                | NB                                                                                |                                                                                   | SB                         |                                                                                   |                                                                                   |
| HCM Control Delay, s       | 83.4                                                                              | 0                                                                                 |                                                                                   | 1.4                        |                                                                                   |                                                                                   |
| HCM LOS                    | F                                                                                 |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt      | NBT                                                                               | NBR                                                                               | WBLn1                                                                             | WBLn2                      | SBL                                                                               | SBT                                                                               |
| Capacity (veh/h)           | -                                                                                 | -                                                                                 | 176                                                                               | 564                        | 1037                                                                              | -                                                                                 |
| HCM Lane V/C Ratio         | -                                                                                 | -                                                                                 | 0.889                                                                             | 1.056                      | 0.097                                                                             | -                                                                                 |
| HCM Control Delay (s)      | -                                                                                 | -                                                                                 | 94.4                                                                              | 80.5                       | 8.8                                                                               | -                                                                                 |
| HCM Lane LOS               | -                                                                                 | -                                                                                 | F                                                                                 | F                          | A                                                                                 | -                                                                                 |
| HCM 95th %tile Q(veh)      | -                                                                                 | -                                                                                 | 6.5                                                                               | 17.1                       | 0.3                                                                               | -                                                                                 |
| Notes                      |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| ~: Volume exceeds capacity |                                                                                   | \$: Delay exceeds 300s                                                            |                                                                                   | +: Computation Not Defined |                                                                                   | *: All major volume in platoon                                                    |

6:

**Intersection**

Int Delay, s/veh 19.8

| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 348                                                                               | 457                                                                               | 232                                                                               | 102  | 98                                                                                | 37                                                                                |
| Future Vol, veh/h        | 348                                                                               | 457                                                                               | 232                                                                               | 102  | 98                                                                                | 37                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 150                                                                               | -                                                                                 | -    | 75                                                                                | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 378                                                                               | 497                                                                               | 252                                                                               | 111  | 107                                                                               | 40                                                                                |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 562    | 308    | 0      | 0 | 363   |
| Stage 1              | 308    | -      | -      | - | -     |
| Stage 2              | 254    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 488    | 732    | -      | - | 1196  |
| Stage 1              | 745    | -      | -      | - | -     |
| Stage 2              | 788    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 445    | 732    | -      | - | 1196  |
| Mov Cap-2 Maneuver   | 445    | -      | -      | - | -     |
| Stage 1              | 745    | -      | -      | - | -     |
| Stage 2              | 718    | -      | -      | - | -     |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 30.3 | 0  | 6  |
| HCM LOS              | D    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1WBLn2 | SBL  | SBT   |
|-----------------------|-----|---------------|------|-------|
| Capacity (veh/h)      | -   | -             | 445  | 732   |
| HCM Lane V/C Ratio    | -   | -             | 0.85 | 0.679 |
| HCM Control Delay (s) | -   | -             | 44.4 | 19.6  |
| HCM Lane LOS          | -   | -             | E    | C     |
| HCM 95th %tile Q(veh) | -   | -             | 8.4  | 5.4   |

| Intersection             |                                                                                   |          |                                                                                   |       |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 4                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |       |       |  |
| Traffic Vol, veh/h       | 112                                                                               | 0        | 37                                                                                | 13    | 3     | 135                                                                               |
| Future Vol, veh/h        | 112                                                                               | 0        | 37                                                                                | 13    | 3     | 135                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0     | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free  | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None  | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -     | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92    | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2     | 2     | 2                                                                                 |
| Mvmt Flow                | 122                                                                               | 0        | 40                                                                                | 14    | 3     | 147                                                                               |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |       |       |                                                                                   |
| Conflicting Flow All     | 200                                                                               | 47       | 0                                                                                 | 0     | 54    | 0                                                                                 |
| Stage 1                  | 47                                                                                | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 153                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -     | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -     | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 789                                                                               | 1022     | -                                                                                 | -     | 1551  | -                                                                                 |
| Stage 1                  | 975                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 875                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -     |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 787                                                                               | 1022     | -                                                                                 | -     | 1551  | -                                                                                 |
| Mov Cap-2 Maneuver       | 787                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 1                  | 975                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 873                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       |                                                                                   | SB    |       |                                                                                   |
| HCM Control Delay, s     | 10.4                                                                              | 0        |                                                                                   | 0.2   |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 787                                                                               | 1551  | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.155                                                                             | 0.002 | -     |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | -        | 10.4                                                                              | 7.3   | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | B                                                                                 | A     | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.5                                                                               | 0     | -     |                                                                                   |

# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Open PM  
09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 178                                                                               | 1360                                                                              | 1                                                                                 | 1                                                                                 | 1160                                                                              | 50                                                                                | 47                                                                                  | 0                                                                                   | 1                                                                                   | 81                                                                                  | 0                                                                                   | 144                                                                                 |
| Future Volume (veh/h)                                                                              | 178                                                                               | 1360                                                                              | 1                                                                                 | 1                                                                                 | 1160                                                                              | 50                                                                                | 47                                                                                  | 0                                                                                   | 1                                                                                   | 81                                                                                  | 0                                                                                   | 144                                                                                 |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 193                                                                               | 1478                                                                              | 1                                                                                 | 1                                                                                 | 1261                                                                              | 54                                                                                | 51                                                                                  | 0                                                                                   | 1                                                                                   | 88                                                                                  | 0                                                                                   | 157                                                                                 |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 265                                                                               | 1758                                                                              | 1                                                                                 | 3                                                                                 | 1685                                                                              | 72                                                                                | 109                                                                                 | 0                                                                                   | 421                                                                                 | 258                                                                                 | 0                                                                                   | 186                                                                                 |
| Arrive On Green                                                                                    | 0.15                                                                              | 0.48                                                                              | 0.48                                                                              | 0.00                                                                              | 0.34                                                                              | 0.34                                                                              | 0.06                                                                                | 0.00                                                                                | 0.27                                                                                | 0.12                                                                                | 0.00                                                                                | 0.12                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3644                                                                              | 2                                                                                 | 1781                                                                              | 5021                                                                              | 215                                                                               | 1781                                                                                | 0                                                                                   | 1585                                                                                | 1416                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 193                                                                               | 721                                                                               | 758                                                                               | 1                                                                                 | 855                                                                               | 460                                                                               | 51                                                                                  | 0                                                                                   | 1                                                                                   | 88                                                                                  | 0                                                                                   | 157                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1870                                                                              | 1781                                                                              | 1702                                                                              | 1832                                                                              | 1781                                                                                | 0                                                                                   | 1585                                                                                | 1416                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 8.1                                                                               | 27.7                                                                              | 27.7                                                                              | 0.0                                                                               | 17.5                                                                              | 17.5                                                                              | 2.2                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 4.6                                                                                 | 0.0                                                                                 | 7.6                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 8.1                                                                               | 27.7                                                                              | 27.7                                                                              | 0.0                                                                               | 17.5                                                                              | 17.5                                                                              | 2.2                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 4.6                                                                                 | 0.0                                                                                 | 7.6                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.00                                                                              | 1.00                                                                              |                                                                                   | 0.12                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 265                                                                               | 857                                                                               | 902                                                                               | 3                                                                                 | 1142                                                                              | 615                                                                               | 109                                                                                 | 0                                                                                   | 421                                                                                 | 258                                                                                 | 0                                                                                   | 186                                                                                 |
| V/C Ratio(X)                                                                                       | 0.73                                                                              | 0.84                                                                              | 0.84                                                                              | 0.29                                                                              | 0.75                                                                              | 0.75                                                                              | 0.47                                                                                | 0.00                                                                                | 0.00                                                                                | 0.34                                                                                | 0.00                                                                                | 0.84                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 409                                                                               | 966                                                                               | 1017                                                                              | 159                                                                               | 1373                                                                              | 739                                                                               | 109                                                                                 | 0                                                                                   | 421                                                                                 | 258                                                                                 | 0                                                                                   | 186                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 31.8                                                                              | 17.7                                                                              | 17.7                                                                              | 39.0                                                                              | 23.1                                                                              | 23.1                                                                              | 35.5                                                                                | 0.0                                                                                 | 21.2                                                                                | 32.6                                                                                | 0.0                                                                                 | 33.9                                                                                |
| Incr Delay (d2), s/veh                                                                             | 3.8                                                                               | 6.1                                                                               | 5.9                                                                               | 41.4                                                                              | 1.9                                                                               | 3.5                                                                               | 3.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 3.6                                                                                 | 0.0                                                                                 | 34.9                                                                                |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 3.7                                                                               | 11.6                                                                              | 12.2                                                                              | 0.1                                                                               | 6.9                                                                               | 7.7                                                                               | 1.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.8                                                                                 | 0.0                                                                                 | 4.6                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 35.7                                                                              | 23.8                                                                              | 23.5                                                                              | 80.4                                                                              | 25.0                                                                              | 26.6                                                                              | 38.6                                                                                | 0.0                                                                                 | 21.2                                                                                | 36.2                                                                                | 0.0                                                                                 | 68.7                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | C                                                                                 | C                                                                                 | F                                                                                 | C                                                                                 | C                                                                                 | D                                                                                   | A                                                                                   | C                                                                                   | D                                                                                   | A                                                                                   | E                                                                                   |
| Approach Vol, veh/h                                                                                | 1672                                                                              |                                                                                   |                                                                                   |                                                                                   | 1316                                                                              |                                                                                   | 52                                                                                  |                                                                                     |                                                                                     |                                                                                     | 245                                                                                 |                                                                                     |
| Approach Delay, s/veh                                                                              | 25.0                                                                              |                                                                                   |                                                                                   |                                                                                   | 25.6                                                                              |                                                                                   | 38.3                                                                                |                                                                                     |                                                                                     |                                                                                     | 57.0                                                                                |                                                                                     |
| Approach LOS                                                                                       | C                                                                                 |                                                                                   |                                                                                   |                                                                                   | C                                                                                 |                                                                                   | D                                                                                   |                                                                                     |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 |                                                                                   | 3                                                                                 |                                                                                   | 4                                                                                 |                                                                                   | 5                                                                                   |                                                                                     | 6                                                                                   |                                                                                     | 7                                                                                   |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 27.6                                                                              |                                                                                   | 18.1                                                                              |                                                                                   | 32.7                                                                              |                                                                                   | 11.6                                                                                |                                                                                     | 16.0                                                                                |                                                                                     | 6.6                                                                                 |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             |                                                                                   | * 6.4                                                                             |                                                                                   | * 6.4                                                                             |                                                                                   | * 6.8                                                                               |                                                                                     | * 6.8                                                                               |                                                                                     | * 6.4                                                                               |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 21                                                                              |                                                                                   | * 18                                                                              |                                                                                   | * 32                                                                              |                                                                                   | * 4.8                                                                               |                                                                                     | * 9.2                                                                               |                                                                                     | * 7                                                                                 |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                                                       | 2.0                                                                               |                                                                                   | 10.1                                                                              |                                                                                   | 19.5                                                                              |                                                                                   | 4.2                                                                                 |                                                                                     | 9.6                                                                                 |                                                                                     | 2.0                                                                                 |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               |                                                                                   | 0.3                                                                               |                                                                                   | 6.8                                                                               |                                                                                   | 0.0                                                                                 |                                                                                     | 0.0                                                                                 |                                                                                     | 8.1                                                                                 |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 |                                                                                   |                                                                                   | 27.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |



# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

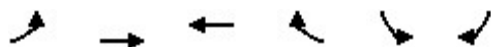
2020 Bridge Open PM  
09/25/2020

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|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 114                                                                               | 1146                                                                              | 108                                                                               | 56                                                                                | 992                                                                               | 46                                                                                | 71                                                                                  | 1                                                                                   | 87                                                                                  | 77                                                                                  | 6                                                                                   | 104                                                                                 |
| Future Volume (veh/h)        | 114                                                                               | 1146                                                                              | 108                                                                               | 56                                                                                | 992                                                                               | 46                                                                                | 71                                                                                  | 1                                                                                   | 87                                                                                  | 77                                                                                  | 6                                                                                   | 104                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 124                                                                               | 1246                                                                              | 117                                                                               | 61                                                                                | 1078                                                                              | 50                                                                                | 77                                                                                  | 1                                                                                   | 95                                                                                  | 84                                                                                  | 7                                                                                   | 113                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 307                                                                               | 1208                                                                              | 113                                                                               | 140                                                                               | 1339                                                                              | 1134                                                                              | 79                                                                                  | 2                                                                                   | 149                                                                                 | 99                                                                                  | 9                                                                                   | 143                                                                                 |
| Arrive On Green              | 0.05                                                                              | 0.72                                                                              | 0.72                                                                              | 0.05                                                                              | 0.72                                                                              | 0.72                                                                              | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                | 0.09                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 1684                                                                              | 158                                                                               | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1272                                                                                | 17                                                                                  | 1571                                                                                | 1300                                                                                | 93                                                                                  | 1506                                                                                |
| Grp Volume(v), veh/h         | 124                                                                               | 0                                                                                 | 1363                                                                              | 61                                                                                | 1078                                                                              | 50                                                                                | 77                                                                                  | 0                                                                                   | 96                                                                                  | 84                                                                                  | 0                                                                                   | 120                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1842                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1272                                                                                | 0                                                                                   | 1588                                                                                | 1300                                                                                | 0                                                                                   | 1599                                                                                |
| Q Serve(g_s), s              | 2.4                                                                               | 0.0                                                                               | 100.4                                                                             | 1.2                                                                               | 54.1                                                                              | 1.3                                                                               | 3.0                                                                                 | 0.0                                                                                 | 8.2                                                                                 | 5.1                                                                                 | 0.0                                                                                 | 10.3                                                                                |
| Cycle Q Clear(g_c), s        | 2.4                                                                               | 0.0                                                                               | 100.4                                                                             | 1.2                                                                               | 54.1                                                                              | 1.3                                                                               | 13.3                                                                                | 0.0                                                                                 | 8.2                                                                                 | 13.3                                                                                | 0.0                                                                                 | 10.3                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 0.09                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.99                                                                                | 1.00                                                                                |                                                                                     | 0.94                                                                                |
| Lane Grp Cap(c), veh/h       | 307                                                                               | 0                                                                                 | 1321                                                                              | 140                                                                               | 1339                                                                              | 1134                                                                              | 79                                                                                  | 0                                                                                   | 151                                                                                 | 99                                                                                  | 0                                                                                   | 152                                                                                 |
| V/C Ratio(X)                 | 0.40                                                                              | 0.00                                                                              | 1.03                                                                              | 0.43                                                                              | 0.81                                                                              | 0.04                                                                              | 0.98                                                                                | 0.00                                                                                | 0.64                                                                                | 0.85                                                                                | 0.00                                                                                | 0.79                                                                                |
| Avail Cap(c_a), veh/h        | 307                                                                               | 0                                                                                 | 1321                                                                              | 140                                                                               | 1339                                                                              | 1134                                                                              | 79                                                                                  | 0                                                                                   | 151                                                                                 | 99                                                                                  | 0                                                                                   | 152                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 18.0                                                                              | 0.0                                                                               | 19.8                                                                              | 39.8                                                                              | 13.4                                                                              | 5.8                                                                               | 69.5                                                                                | 0.0                                                                                 | 61.0                                                                                | 68.5                                                                                | 0.0                                                                                 | 62.0                                                                                |
| Incr Delay (d2), s/veh       | 3.9                                                                               | 0.0                                                                               | 33.3                                                                              | 9.5                                                                               | 5.2                                                                               | 0.1                                                                               | 94.9                                                                                | 0.0                                                                                 | 18.8                                                                                | 55.6                                                                                | 0.0                                                                                 | 33.0                                                                                |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 2.3                                                                               | 0.0                                                                               | 50.1                                                                              | 1.9                                                                               | 22.7                                                                              | 0.4                                                                               | 4.9                                                                                 | 0.0                                                                                 | 4.1                                                                                 | 4.6                                                                                 | 0.0                                                                                 | 5.6                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 21.9                                                                              | 0.0                                                                               | 53.1                                                                              | 49.3                                                                              | 18.6                                                                              | 5.9                                                                               | 164.4                                                                               | 0.0                                                                                 | 79.8                                                                                | 124.1                                                                               | 0.0                                                                                 | 95.0                                                                                |
| LnGrp LOS                    | C                                                                                 | A                                                                                 | F                                                                                 | D                                                                                 | B                                                                                 | A                                                                                 | F                                                                                   | A                                                                                   | E                                                                                   | F                                                                                   | A                                                                                   | F                                                                                   |
| Approach Vol, veh/h          | 1487                                                                              |                                                                                   |                                                                                   | 1189                                                                              |                                                                                   |                                                                                   | 173                                                                                 |                                                                                     |                                                                                     | 204                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 50.5                                                                              |                                                                                   |                                                                                   | 19.6                                                                              |                                                                                   |                                                                                   | 117.4                                                                               |                                                                                     |                                                                                     | 107.0                                                                               |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | F                                                                                   |                                                                                     |                                                                                     | F                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 2                                                                                 |                                                                                   | 3                                                                                 | 4                                                                                 |                                                                                   | 6                                                                                 |                                                                                     | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 19.4                                                                              |                                                                                   | 13.8                                                                              | 106.8                                                                             |                                                                                   | 19.4                                                                              |                                                                                     | 13.6                                                                                | 107.0                                                                               |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | 6.1                                                                               |                                                                                   | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.1                                                                               |                                                                                     | 6.6                                                                                 | 6.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | 13.3                                                                              |                                                                                   | 7.2                                                                               | 100.2                                                                             |                                                                                   | 13.3                                                                              |                                                                                     | 7.0                                                                                 | 100.4                                                                               |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 15.3                                                                              |                                                                                   | 4.4                                                                               | 56.1                                                                              |                                                                                   | 15.3                                                                              |                                                                                     | 3.2                                                                                 | 102.4                                                                               |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               |                                                                                   | 0.1                                                                               | 13.4                                                                              |                                                                                   | 0.0                                                                               |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay           | 46.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                  | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Open PM  
09/25/2020



| Movement                     | EBL  | EBT  | WBT  | WBR  | SBL  | SBR   |
|------------------------------|------|------|------|------|------|-------|
| Lane Configurations          |      |      |      |      |      |       |
| Traffic Volume (veh/h)       | 210  | 1082 | 867  | 158  | 334  | 215   |
| Future Volume (veh/h)        | 210  | 1082 | 867  | 158  | 334  | 215   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |      | 1.00 | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No   |      | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 228  | 1176 | 942  | 0    | 363  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     |
| Cap, veh/h                   | 253  | 1280 | 1004 |      | 386  |       |
| Arrive On Green              | 0.09 | 0.68 | 0.54 | 0.00 | 0.22 | 0.00  |
| Sat Flow, veh/h              | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Grp Volume(v), veh/h         | 228  | 1176 | 942  | 0    | 363  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Q Serve(g_s), s              | 10.0 | 69.0 | 60.6 | 0.0  | 25.9 | 0.0   |
| Cycle Q Clear(g_c), s        | 10.0 | 69.0 | 60.6 | 0.0  | 25.9 | 0.0   |
| Prop In Lane                 | 1.00 |      |      | 0.00 | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 253  | 1280 | 1004 |      | 386  |       |
| V/C Ratio(X)                 | 0.90 | 0.92 | 0.94 |      | 0.94 |       |
| Avail Cap(c_a), veh/h        | 277  | 1448 | 1132 |      | 392  |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 55.2 | 17.3 | 27.9 | 0.0  | 49.7 | 0.0   |
| Incr Delay (d2), s/veh       | 28.2 | 9.0  | 13.5 | 0.0  | 30.5 | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 9.3  | 29.9 | 29.8 | 0.0  | 14.8 | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |
| LnGrp Delay(d),s/veh         | 83.4 | 26.3 | 41.3 | 0.0  | 80.3 | 0.0   |
| LnGrp LOS                    | F    | C    | D    |      | F    |       |
| Approach Vol, veh/h          |      | 1404 | 942  | A    | 363  | A     |
| Approach Delay, s/veh        |      | 35.6 | 41.3 |      | 80.3 |       |
| Approach LOS                 |      | D    | D    |      | F    |       |
| Timer - Assigned Phs         |      |      | 3    | 4    | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 19.0 | 76.2 | 33.8 | 95.2  |
| Change Period (Y+Rc), s      |      |      | 6.9  | 6.9  | 5.9  | * 6.9 |
| Max Green Setting (Gmax), s  |      |      | 13.8 | 78.1 | 28.4 | * 1E2 |
| Max Q Clear Time (g_c+I1), s |      |      | 12.0 | 62.6 | 27.9 | 71.0  |
| Green Ext Time (p_c), s      |      |      | 0.1  | 6.7  | 0.1  | 13.4  |
| <b>Intersection Summary</b>  |      |      |      |      |      |       |
| HCM 6th Ctrl Delay           |      |      | 43.6 |      |      |       |
| HCM 6th LOS                  |      |      | D    |      |      |       |

### Notes

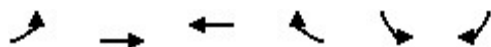
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Open PM  
09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 339  | 1052 | 850   | 210   | 124  | 173   |
| Future Volume (veh/h)        | 339  | 1052 | 850   | 210   | 124  | 173   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 368  | 1143 | 924   | 0     | 135  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 434  | 2544 | 1290  |       | 332  |       |
| Arrive On Green              | 0.24 | 0.72 | 0.36  | 0.00  | 0.10 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 368  | 1143 | 924   | 0     | 135  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 13.2 | 9.0  | 15.0  | 0.0   | 2.5  | 0.0   |
| Cycle Q Clear(g_c), s        | 13.2 | 9.0  | 15.0  | 0.0   | 2.5  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 434  | 2544 | 1290  |       | 332  |       |
| V/C Ratio(X)                 | 0.85 | 0.45 | 0.72  |       | 0.41 |       |
| Avail Cap(c_a), veh/h        | 1030 | 4708 | 2266  |       | 965  |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 24.1 | 4.0  | 18.3  | 0.0   | 28.5 | 0.0   |
| Incr Delay (d2), s/veh       | 4.7  | 0.1  | 0.8   | 0.0   | 0.8  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 5.7  | 2.1  | 5.7   | 0.0   | 1.0  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 28.8 | 4.1  | 19.1  | 0.0   | 29.3 | 0.0   |
| LnGrp LOS                    | C    | A    | B     |       | C    |       |
| Approach Vol, veh/h          |      | 1511 | 924   | A     | 135  | A     |
| Approach Delay, s/veh        |      | 10.1 | 19.1  |       | 29.3 |       |
| Approach LOS                 |      | B    | B     |       | C    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 23.6  | 31.6  | 11.7 | 55.2  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 39  | * 43  | 18.7 | * 89  |
| Max Q Clear Time (g_c+l1), s |      |      | 15.2  | 17.0  | 4.5  | 11.0  |
| Green Ext Time (p_c), s      |      |      | 1.1   | 7.3   | 0.3  | 12.0  |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 14.4  |       |      |       |
| HCM 6th LOS                  |      |      | B     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Open PM

09/25/2020

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 260                                                                               | 0                                                                                 | 204                                                                               | 4                                                                                 | 0                                                                                 | 0                                                                                 | 25                                                                                  | 450                                                                                 | 1                                                                                   | 0                                                                                   | 555                                                                                 | 105                                                                                 |
| Future Volume (veh/h)        | 260                                                                               | 0                                                                                 | 204                                                                               | 4                                                                                 | 0                                                                                 | 0                                                                                 | 25                                                                                  | 450                                                                                 | 1                                                                                   | 0                                                                                   | 555                                                                                 | 105                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 283                                                                               | 0                                                                                 | 222                                                                               | 4                                                                                 | 0                                                                                 | 0                                                                                 | 27                                                                                  | 489                                                                                 | 1                                                                                   | 0                                                                                   | 603                                                                                 | 114                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 446                                                                               | 0                                                                                 | 435                                                                               | 204                                                                               | 0                                                                                 | 0                                                                                 | 316                                                                                 | 694                                                                                 | 1                                                                                   | 397                                                                                 | 696                                                                                 | 590                                                                                 |
| Arrive On Green              | 0.09                                                                              | 0.00                                                                              | 0.27                                                                              | 0.09                                                                              | 0.00                                                                              | 0.00                                                                              | 0.09                                                                                | 0.37                                                                                | 0.37                                                                                | 0.00                                                                                | 0.37                                                                                | 0.37                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 0                                                                                 | 1585                                                                              | 1159                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                                | 1866                                                                                | 4                                                                                   | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Grp Volume(v), veh/h         | 283                                                                               | 0                                                                                 | 222                                                                               | 4                                                                                 | 0                                                                                 | 0                                                                                 | 27                                                                                  | 0                                                                                   | 490                                                                                 | 0                                                                                   | 603                                                                                 | 114                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1585                                                                              | 1159                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                                | 0                                                                                   | 1870                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Q Serve(g_s), s              | 7.1                                                                               | 0.0                                                                               | 8.9                                                                               | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                                 | 0.0                                                                                 | 16.7                                                                                | 0.0                                                                                 | 22.4                                                                                | 3.7                                                                                 |
| Cycle Q Clear(g_c), s        | 7.1                                                                               | 0.0                                                                               | 8.9                                                                               | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                                 | 0.0                                                                                 | 16.7                                                                                | 0.0                                                                                 | 22.4                                                                                | 3.7                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 0.00                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h       | 446                                                                               | 0                                                                                 | 435                                                                               | 204                                                                               | 0                                                                                 | 0                                                                                 | 316                                                                                 | 0                                                                                   | 696                                                                                 | 397                                                                                 | 696                                                                                 | 590                                                                                 |
| V/C Ratio(X)                 | 0.64                                                                              | 0.00                                                                              | 0.51                                                                              | 0.02                                                                              | 0.00                                                                              | 0.00                                                                              | 0.09                                                                                | 0.00                                                                                | 0.70                                                                                | 0.00                                                                                | 0.87                                                                                | 0.19                                                                                |
| Avail Cap(c_a), veh/h        | 446                                                                               | 0                                                                                 | 435                                                                               | 204                                                                               | 0                                                                                 | 0                                                                                 | 316                                                                                 | 0                                                                                   | 696                                                                                 | 397                                                                                 | 696                                                                                 | 590                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 27.5                                                                              | 0.0                                                                               | 22.9                                                                              | 30.9                                                                              | 0.0                                                                               | 0.0                                                                               | 14.4                                                                                | 0.0                                                                                 | 20.0                                                                                | 0.0                                                                                 | 21.8                                                                                | 15.9                                                                                |
| Incr Delay (d2), s/veh       | 3.0                                                                               | 0.0                                                                               | 4.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 5.9                                                                                 | 0.0                                                                                 | 13.7                                                                                | 0.7                                                                                 |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 4.9                                                                               | 0.0                                                                               | 3.7                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 7.9                                                                                 | 0.0                                                                                 | 11.7                                                                                | 1.4                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 30.5                                                                              | 0.0                                                                               | 27.2                                                                              | 31.0                                                                              | 0.0                                                                               | 0.0                                                                               | 14.9                                                                                | 0.0                                                                                 | 25.9                                                                                | 0.0                                                                                 | 35.5                                                                                | 16.7                                                                                |
| LnGrp LOS                    | C                                                                                 | A                                                                                 | C                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | B                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | D                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 505                                                                               |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 517                                                                                 |                                                                                     |                                                                                     | 717                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 29.0                                                                              |                                                                                   |                                                                                   | 31.0                                                                              |                                                                                   |                                                                                   | 25.4                                                                                |                                                                                     |                                                                                     | 32.5                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 13.5                                                                              | 34.4                                                                              | 13.6                                                                              | 13.5                                                                              | 13.5                                                                              | 34.4                                                                              | 27.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | * 7                                                                               | * 28                                                                              | 7.1                                                                               | 7.0                                                                               | * 7                                                                               | * 28                                                                              | 20.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 0.0                                                                               | 18.7                                                                              | 9.1                                                                               | 2.2                                                                               | 2.6                                                                               | 24.4                                                                              | 10.9                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 2.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.5                                                                               | 0.9                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

### Intersection Summary

HCM 6th Ctrl Delay 29.4

HCM 6th LOS C

### Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 5.8                                                                               |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 46                                                                                | 222                                                                               | 348                                                                               | 92   | 229                                                                               | 511                                                                               |
| Future Vol, veh/h        | 46                                                                                | 222                                                                               | 348                                                                               | 92   | 229                                                                               | 511                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 175                                                                               | -                                                                                 | -    | 250                                                                               | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 50                                                                                | 241                                                                               | 378                                                                               | 100  | 249                                                                               | 555                                                                               |
| Major/Minor              | Minor1                                                                            | Major1                                                                            | Major2                                                                            |      |                                                                                   |                                                                                   |
| Conflicting Flow All     | 1481                                                                              | 428                                                                               | 0                                                                                 | 0    | 478                                                                               | 0                                                                                 |
| Stage 1                  | 428                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 1053                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -    | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -    | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver       | 138                                                                               | 627                                                                               | -                                                                                 | -    | 1084                                                                              | -                                                                                 |
| Stage 1                  | 657                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 336                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Platoon blocked, %       |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver       | 106                                                                               | 627                                                                               | -                                                                                 | -    | 1084                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver       | 106                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 1                  | 657                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 259                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Approach                 | WB                                                                                | NB                                                                                | SB                                                                                |      |                                                                                   |                                                                                   |
| HCM Control Delay, s     | 23.2                                                                              | 0                                                                                 | 2.9                                                                               |      |                                                                                   |                                                                                   |
| HCM LOS                  | C                                                                                 |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1WBLn2                                                                     | SBL                                                                               | SBT  |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 106 627 1084                                                                    |                                                                                   |      |                                                                                   | -                                                                                 |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.472 0.385 0.23                                                                |                                                                                   |      |                                                                                   | -                                                                                 |
| HCM Control Delay (s)    | -                                                                                 | - 66.2 14.3 9.3                                                                   |                                                                                   |      |                                                                                   | -                                                                                 |
| HCM Lane LOS             | -                                                                                 | - F B A                                                                           |                                                                                   |      |                                                                                   | -                                                                                 |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 2.1 1.8 0.9                                                                     |                                                                                   |      |                                                                                   | -                                                                                 |

6:

| Intersection               |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh           | 65.4                                                                              |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Movement                   | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                        | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                            |  |  |
| Traffic Vol, veh/h         | 256                                                                               | 157                                                                               | 110                                                                               | 447                        | 280                                                                               | 38                                                                                |
| Future Vol, veh/h          | 256                                                                               | 157                                                                               | 110                                                                               | 447                        | 280                                                                               | 38                                                                                |
| Conflicting Peds, #/hr     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                          | 0                                                                                 | 0                                                                                 |
| Sign Control               | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                       | Free                                                                              | Free                                                                              |
| RT Channelized             | -                                                                                 | None                                                                              | -                                                                                 | None                       | -                                                                                 | None                                                                              |
| Storage Length             | 0                                                                                 | 150                                                                               | -                                                                                 | -                          | 75                                                                                | -                                                                                 |
| Veh in Median Storage, #   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Grade, %                   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Peak Hour Factor           | 92                                                                                | 92                                                                                | 92                                                                                | 92                         | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                          | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                  | 278                                                                               | 171                                                                               | 120                                                                               | 486                        | 304                                                                               | 41                                                                                |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Major/Minor                | Minor1                                                                            | Major1                                                                            |                                                                                   | Major2                     |                                                                                   |                                                                                   |
| Conflicting Flow All       | 1012                                                                              | 363                                                                               | 0                                                                                 | 0                          | 606                                                                               | 0                                                                                 |
| Stage 1                    | 363                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 649                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy              | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -                          | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Follow-up Hdwy             | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -                          | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver         | ~ 265                                                                             | 682                                                                               | -                                                                                 | -                          | 972                                                                               | -                                                                                 |
| Stage 1                    | 704                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 520                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Platoon blocked, %         |                                                                                   |                                                                                   | -                                                                                 | -                          |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver         | ~ 182                                                                             | 682                                                                               | -                                                                                 | -                          | 972                                                                               | -                                                                                 |
| Mov Cap-2 Maneuver         | ~ 182                                                                             | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 1                    | 704                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 357                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Approach                   | WB                                                                                | NB                                                                                |                                                                                   | SB                         |                                                                                   |                                                                                   |
| HCM Control Delay, s       | 197                                                                               | 0                                                                                 |                                                                                   | 9.1                        |                                                                                   |                                                                                   |
| HCM LOS                    | F                                                                                 |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt      | NBT                                                                               | NBR                                                                               | WBLn1                                                                             | WBLn2                      | SBL                                                                               | SBT                                                                               |
| Capacity (veh/h)           | -                                                                                 | -                                                                                 | 182                                                                               | 682                        | 972                                                                               | -                                                                                 |
| HCM Lane V/C Ratio         | -                                                                                 | -                                                                                 | 1.529                                                                             | 0.25                       | 0.313                                                                             | -                                                                                 |
| HCM Control Delay (s)      | -                                                                                 | -                                                                                 | \$ 310.4                                                                          | 12                         | 10.4                                                                              | -                                                                                 |
| HCM Lane LOS               | -                                                                                 | -                                                                                 | F                                                                                 | B                          | B                                                                                 | -                                                                                 |
| HCM 95th %tile Q(veh)      | -                                                                                 | -                                                                                 | 17.9                                                                              | 1                          | 1.3                                                                               | -                                                                                 |
| Notes                      |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| ~: Volume exceeds capacity |                                                                                   | \$: Delay exceeds 300s                                                            |                                                                                   | +: Computation Not Defined |                                                                                   | *: All major volume in platoon                                                    |

| Intersection             |                                                                                   |          |                                                                                   |        |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.6                                                                               |          |                                                                                   |        |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |        |       |  |
| Traffic Vol, veh/h       | 47                                                                                | 1        | 129                                                                               | 74     | 1     | 52                                                                                |
| Future Vol, veh/h        | 47                                                                                | 1        | 129                                                                               | 74     | 1     | 52                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0      | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free   | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None   | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -      | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92     | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2      | 2     | 2                                                                                 |
| Mvmt Flow                | 51                                                                                | 1        | 140                                                                               | 80     | 1     | 57                                                                                |
| Major/Minor              | Minor1                                                                            | Major1   |                                                                                   | Major2 |       |                                                                                   |
| Conflicting Flow All     | 239                                                                               | 180      | 0                                                                                 | 0      | 220   | 0                                                                                 |
| Stage 1                  | 180                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 59                                                                                | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -      | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -      | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 749                                                                               | 863      | -                                                                                 | -      | 1349  | -                                                                                 |
| Stage 1                  | 851                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 964                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -      |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 748                                                                               | 863      | -                                                                                 | -      | 1349  | -                                                                                 |
| Mov Cap-2 Maneuver       | 748                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 1                  | 851                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 963                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       |                                                                                   | SB     |       |                                                                                   |
| HCM Control Delay, s     | 10.2                                                                              | 0        |                                                                                   | 0.1    |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |        |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 750    |                                                                                   | 1349   | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.07   |                                                                                   | 0.001  | -     |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | - 10.2   |                                                                                   | 7.7    | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | - B      |                                                                                   | A      | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 0.2    |                                                                                   | 0      | -     |                                                                                   |



# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Open WE

09/25/2020

|                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 186                                                                               | 848                                                                               | 1                                                                                 | 0                                                                                 | 1040                                                                              | 44                                                                                | 1                                                                                   | 0                                                                                   | 0                                                                                   | 59                                                                                  | 0                                                                                   | 115                                                                                 |
| Future Volume (veh/h)                                                                              | 186                                                                               | 848                                                                               | 1                                                                                 | 0                                                                                 | 1040                                                                              | 44                                                                                | 1                                                                                   | 0                                                                                   | 0                                                                                   | 59                                                                                  | 0                                                                                   | 115                                                                                 |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 202                                                                               | 922                                                                               | 1                                                                                 | 0                                                                                 | 1130                                                                              | 48                                                                                | 1                                                                                   | 0                                                                                   | 0                                                                                   | 64                                                                                  | 0                                                                                   | 125                                                                                 |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 247                                                                               | 1917                                                                              | 2                                                                                 | 2                                                                                 | 1527                                                                              | 65                                                                                | 65                                                                                  | 564                                                                                 | 0                                                                                   | 344                                                                                 | 0                                                                                   | 279                                                                                 |
| Arrive On Green                                                                                    | 0.14                                                                              | 0.53                                                                              | 0.53                                                                              | 0.00                                                                              | 0.30                                                                              | 0.30                                                                              | 0.04                                                                                | 0.00                                                                                | 0.00                                                                                | 0.18                                                                                | 0.00                                                                                | 0.18                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3643                                                                              | 4                                                                                 | 1781                                                                              | 5023                                                                              | 213                                                                               | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 202                                                                               | 450                                                                               | 473                                                                               | 0                                                                                 | 766                                                                               | 412                                                                               | 1                                                                                   | 0                                                                                   | 0                                                                                   | 64                                                                                  | 0                                                                                   | 125                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1870                                                                              | 1781                                                                              | 1702                                                                              | 1832                                                                              | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 8.4                                                                               | 12.3                                                                              | 12.3                                                                              | 0.0                                                                               | 15.5                                                                              | 15.5                                                                              | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 3.0                                                                                 | 0.0                                                                                 | 5.4                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 8.4                                                                               | 12.3                                                                              | 12.3                                                                              | 0.0                                                                               | 15.5                                                                              | 15.5                                                                              | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 3.0                                                                                 | 0.0                                                                                 | 5.4                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.00                                                                              | 1.00                                                                              |                                                                                   | 0.12                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 247                                                                               | 935                                                                               | 984                                                                               | 2                                                                                 | 1035                                                                              | 557                                                                               | 65                                                                                  | 564                                                                                 | 0                                                                                   | 344                                                                                 | 0                                                                                   | 279                                                                                 |
| V/C Ratio(X)                                                                                       | 0.82                                                                              | 0.48                                                                              | 0.48                                                                              | 0.00                                                                              | 0.74                                                                              | 0.74                                                                              | 0.02                                                                                | 0.00                                                                                | 0.00                                                                                | 0.19                                                                                | 0.00                                                                                | 0.45                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 435                                                                               | 935                                                                               | 984                                                                               | 163                                                                               | 1271                                                                              | 684                                                                               | 65                                                                                  | 564                                                                                 | 0                                                                                   | 344                                                                                 | 0                                                                                   | 279                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 32.0                                                                              | 11.5                                                                              | 11.5                                                                              | 0.0                                                                               | 23.9                                                                              | 24.0                                                                              | 35.6                                                                                | 0.0                                                                                 | 0.0                                                                                 | 27.2                                                                                | 0.0                                                                                 | 28.2                                                                                |
| Incr Delay (d2), s/veh                                                                             | 6.5                                                                               | 0.4                                                                               | 0.4                                                                               | 0.0                                                                               | 1.8                                                                               | 3.4                                                                               | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.2                                                                                 | 0.0                                                                                 | 5.1                                                                                 |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 4.0                                                                               | 4.4                                                                               | 4.7                                                                               | 0.0                                                                               | 6.2                                                                               | 6.9                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.1                                                                                 | 0.0                                                                                 | 2.4                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 38.6                                                                              | 11.9                                                                              | 11.9                                                                              | 0.0                                                                               | 25.8                                                                              | 27.3                                                                              | 35.7                                                                                | 0.0                                                                                 | 0.0                                                                                 | 28.4                                                                                | 0.0                                                                                 | 33.3                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 | C                                                                                 | C                                                                                 | D                                                                                   | A                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   |
| Approach Vol, veh/h                                                                                | 1125                                                                              |                                                                                   |                                                                                   | 1178                                                                              |                                                                                   |                                                                                   | 1                                                                                   |                                                                                     |                                                                                     | 189                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                                                              | 16.7                                                                              |                                                                                   |                                                                                   | 26.3                                                                              |                                                                                   |                                                                                   | 35.7                                                                                |                                                                                     |                                                                                     | 31.7                                                                                |                                                                                     |                                                                                     |
| Approach LOS                                                                                       | B                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   |                                                                                   | 4                                                                                   |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 29.9                                                                              |                                                                                   |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 29.7                                                                                |                                                                                     |                                                                                     | 9.6                                                                                 |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             |                                                                                   |                                                                                   | * 6.4                                                                             |                                                                                   |                                                                                   | * 6.8                                                                               |                                                                                     |                                                                                     | * 6.8                                                                               |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 23                                                                              |                                                                                   |                                                                                   | * 19                                                                              |                                                                                   |                                                                                   | * 29                                                                                |                                                                                     |                                                                                     | * 2.8                                                                               |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                                                       | 0.0                                                                               |                                                                                   |                                                                                   | 10.4                                                                              |                                                                                   |                                                                                   | 17.5                                                                                |                                                                                     |                                                                                     | 2.0                                                                                 |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               |                                                                                   |                                                                                   | 0.3                                                                               |                                                                                   |                                                                                   | 5.8                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 22.4                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

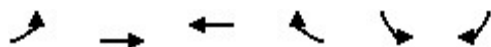
2020 Bridge Open WE  
09/25/2020

|                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)                                             | 64                                                                                | 767                                                                               | 74                                                                                | 46                                                                                | 860                                                                               | 36                                                                                | 33                                                                                  | 3                                                                                   | 65                                                                                  | 19                                                                                  | 1                                                                                   | 56                                                                                  |
| Future Volume (veh/h)                                              | 64                                                                                | 767                                                                               | 74                                                                                | 46                                                                                | 860                                                                               | 36                                                                                | 33                                                                                  | 3                                                                                   | 65                                                                                  | 19                                                                                  | 1                                                                                   | 56                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                              |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                     | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |
| Adj Sat Flow, veh/h/ln                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                               | 70                                                                                | 834                                                                               | 80                                                                                | 50                                                                                | 935                                                                               | 39                                                                                | 36                                                                                  | 3                                                                                   | 71                                                                                  | 21                                                                                  | 1                                                                                   | 61                                                                                  |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                         | 383                                                                               | 1136                                                                              | 109                                                                               | 397                                                                               | 1265                                                                              | 1072                                                                              | 129                                                                                 | 5                                                                                   | 129                                                                                 | 118                                                                                 | 2                                                                                   | 132                                                                                 |
| Arrive On Green                                                    | 0.06                                                                              | 0.68                                                                              | 0.68                                                                              | 0.06                                                                              | 0.68                                                                              | 0.68                                                                              | 0.08                                                                                | 0.08                                                                                | 0.08                                                                                | 0.08                                                                                | 0.08                                                                                | 0.08                                                                                |
| Sat Flow, veh/h                                                    | 1781                                                                              | 1680                                                                              | 161                                                                               | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1340                                                                                | 65                                                                                  | 1530                                                                                | 1326                                                                                | 26                                                                                  | 1563                                                                                |
| Grp Volume(v), veh/h                                               | 70                                                                                | 0                                                                                 | 914                                                                               | 50                                                                                | 935                                                                               | 39                                                                                | 36                                                                                  | 0                                                                                   | 74                                                                                  | 21                                                                                  | 0                                                                                   | 62                                                                                  |
| Grp Sat Flow(s),veh/h/ln                                           | 1781                                                                              | 0                                                                                 | 1841                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1340                                                                                | 0                                                                                   | 1595                                                                                | 1326                                                                                | 0                                                                                   | 1589                                                                                |
| Q Serve(g_s), s                                                    | 1.2                                                                               | 0.0                                                                               | 35.1                                                                              | 0.8                                                                               | 35.6                                                                              | 0.9                                                                               | 2.9                                                                                 | 0.0                                                                                 | 4.9                                                                                 | 1.7                                                                                 | 0.0                                                                                 | 4.1                                                                                 |
| Cycle Q Clear(g_c), s                                              | 1.2                                                                               | 0.0                                                                               | 35.1                                                                              | 0.8                                                                               | 35.6                                                                              | 0.9                                                                               | 7.0                                                                                 | 0.0                                                                                 | 4.9                                                                                 | 6.6                                                                                 | 0.0                                                                                 | 4.1                                                                                 |
| Prop In Lane                                                       | 1.00                                                                              |                                                                                   | 0.09                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.96                                                                                | 1.00                                                                                |                                                                                     | 0.98                                                                                |
| Lane Grp Cap(c), veh/h                                             | 383                                                                               | 0                                                                                 | 1245                                                                              | 397                                                                               | 1265                                                                              | 1072                                                                              | 129                                                                                 | 0                                                                                   | 135                                                                                 | 118                                                                                 | 0                                                                                   | 134                                                                                 |
| V/C Ratio(X)                                                       | 0.18                                                                              | 0.00                                                                              | 0.73                                                                              | 0.13                                                                              | 0.74                                                                              | 0.04                                                                              | 0.28                                                                                | 0.00                                                                                | 0.55                                                                                | 0.18                                                                                | 0.00                                                                                | 0.46                                                                                |
| Avail Cap(c_a), veh/h                                              | 383                                                                               | 0                                                                                 | 1245                                                                              | 397                                                                               | 1265                                                                              | 1072                                                                              | 129                                                                                 | 0                                                                                   | 135                                                                                 | 118                                                                                 | 0                                                                                   | 134                                                                                 |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 10.4                                                                              | 0.0                                                                               | 11.4                                                                              | 9.9                                                                               | 11.5                                                                              | 5.9                                                                               | 51.3                                                                                | 0.0                                                                                 | 48.3                                                                                | 51.5                                                                                | 0.0                                                                                 | 48.0                                                                                |
| Incr Delay (d2), s/veh                                             | 1.1                                                                               | 0.0                                                                               | 3.9                                                                               | 0.7                                                                               | 3.9                                                                               | 0.1                                                                               | 5.3                                                                                 | 0.0                                                                                 | 15.1                                                                                | 3.2                                                                                 | 0.0                                                                                 | 11.0                                                                                |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.7                                                                               | 0.0                                                                               | 14.0                                                                              | 0.4                                                                               | 14.4                                                                              | 0.3                                                                               | 1.2                                                                                 | 0.0                                                                                 | 2.5                                                                                 | 0.7                                                                                 | 0.0                                                                                 | 2.0                                                                                 |
| Unsig. Movement Delay, s/veh                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                               | 11.5                                                                              | 0.0                                                                               | 15.3                                                                              | 10.6                                                                              | 15.4                                                                              | 6.0                                                                               | 56.6                                                                                | 0.0                                                                                 | 63.4                                                                                | 54.7                                                                                | 0.0                                                                                 | 59.0                                                                                |
| LnGrp LOS                                                          | B                                                                                 | A                                                                                 | B                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 | E                                                                                   | A                                                                                   | E                                                                                   | D                                                                                   | A                                                                                   | E                                                                                   |
| Approach Vol, veh/h                                                |                                                                                   | 984                                                                               |                                                                                   |                                                                                   | 1024                                                                              |                                                                                   |                                                                                     | 110                                                                                 |                                                                                     |                                                                                     | 83                                                                                  |                                                                                     |
| Approach Delay, s/veh                                              |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 14.8                                                                              |                                                                                   |                                                                                     | 61.2                                                                                |                                                                                     |                                                                                     | 57.9                                                                                |                                                                                     |
| Approach LOS                                                       |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | E                                                                                   |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |
| Timer - Assigned Phs                                               |                                                                                   | 2                                                                                 | 3                                                                                 | 4                                                                                 |                                                                                   | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           |                                                                                   | 15.4                                                                              | 13.6                                                                              | 81.0                                                                              |                                                                                   | 15.4                                                                              | 13.6                                                                                | 81.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            |                                                                                   | 6.1                                                                               | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.1                                                                               | 6.6                                                                                 | 6.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                        |                                                                                   | 9.3                                                                               | 7.0                                                                               | 74.4                                                                              |                                                                                   | 9.3                                                                               | 7.0                                                                                 | 74.4                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                       |                                                                                   | 9.0                                                                               | 3.2                                                                               | 37.6                                                                              |                                                                                   | 8.6                                                                               | 2.8                                                                                 | 37.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            |                                                                                   | 0.0                                                                               | 0.0                                                                               | 9.6                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                                 | 9.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b>                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                 |                                                                                   |                                                                                   | 18.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                        |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Notes</b>                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Open WE  
09/25/2020



| Movement                     | EBL  | EBT  | WBT  | WBR  | SBL  | SBR   |
|------------------------------|------|------|------|------|------|-------|
| Lane Configurations          |      |      |      |      |      |       |
| Traffic Volume (veh/h)       | 167  | 642  | 725  | 130  | 185  | 206   |
| Future Volume (veh/h)        | 167  | 642  | 725  | 130  | 185  | 206   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |      | 1.00 | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No   |      | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 182  | 698  | 788  | 0    | 201  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     |
| Cap, veh/h                   | 334  | 1277 | 921  |      | 248  |       |
| Arrive On Green              | 0.09 | 0.68 | 0.49 | 0.00 | 0.14 | 0.00  |
| Sat Flow, veh/h              | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Grp Volume(v), veh/h         | 182  | 698  | 788  | 0    | 201  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Q Serve(g_s), s              | 0.0  | 13.6 | 26.6 | 0.0  | 7.9  | 0.0   |
| Cycle Q Clear(g_c), s        | 0.0  | 13.6 | 26.6 | 0.0  | 7.9  | 0.0   |
| Prop In Lane                 | 1.00 |      |      | 0.00 | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 334  | 1277 | 921  |      | 248  |       |
| V/C Ratio(X)                 | 0.54 | 0.55 | 0.86 |      | 0.81 |       |
| Avail Cap(c_a), veh/h        | 425  | 2094 | 1613 |      | 438  |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 28.3 | 5.8  | 16.0 | 0.0  | 30.1 | 0.0   |
| Incr Delay (d2), s/veh       | 1.4  | 0.4  | 2.4  | 0.0  | 6.2  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.9  | 4.0  | 10.5 | 0.0  | 3.7  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |
| LnGrp Delay(d),s/veh         | 29.7 | 6.1  | 18.4 | 0.0  | 36.3 | 0.0   |
| LnGrp LOS                    | C    | A    | B    |      | D    |       |
| Approach Vol, veh/h          |      | 880  | 788  | A    | 201  | A     |
| Approach Delay, s/veh        |      | 11.0 | 18.4 |      | 36.3 |       |
| Approach LOS                 |      | B    | B    |      | D    |       |
| Timer - Assigned Phs         |      |      | 3    | 4    | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 13.7 | 42.4 | 15.9 | 56.1  |
| Change Period (Y+Rc), s      |      |      | 6.9  | 6.9  | 5.9  | * 6.9 |
| Max Green Setting (Gmax), s  |      |      | 10.5 | 62.1 | 17.7 | * 81  |
| Max Q Clear Time (g_c+I1), s |      |      | 2.0  | 28.6 | 9.9  | 15.6  |
| Green Ext Time (p_c), s      |      |      | 0.3  | 6.8  | 0.3  | 6.0   |
| <b>Intersection Summary</b>  |      |      |      |      |      |       |
| HCM 6th Ctrl Delay           |      |      | 16.9 |      |      |       |
| HCM 6th LOS                  |      |      | B    |      |      |       |

### Notes

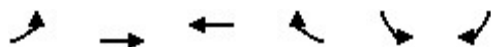
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Open WE  
09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 178  | 636  | 653   | 161   | 99   | 192   |
| Future Volume (veh/h)        | 178  | 636  | 653   | 161   | 99   | 192   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 193  | 691  | 710   | 0     | 108  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 275  | 2239 | 1156  |       | 382  |       |
| Arrive On Green              | 0.15 | 0.63 | 0.33  | 0.00  | 0.11 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 193  | 691  | 710   | 0     | 108  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 5.0  | 4.3  | 8.2   | 0.0   | 1.4  | 0.0   |
| Cycle Q Clear(g_c), s        | 5.0  | 4.3  | 8.2   | 0.0   | 1.4  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 275  | 2239 | 1156  |       | 382  |       |
| V/C Ratio(X)                 | 0.70 | 0.31 | 0.61  |       | 0.28 |       |
| Avail Cap(c_a), veh/h        | 1089 | 5902 | 3196  |       | 1899 |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 19.5 | 4.1  | 13.8  | 0.0   | 19.8 | 0.0   |
| Incr Delay (d2), s/veh       | 3.2  | 0.1  | 0.5   | 0.0   | 0.4  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.1  | 0.9  | 2.8   | 0.0   | 0.5  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 22.7 | 4.2  | 14.4  | 0.0   | 20.2 | 0.0   |
| LnGrp LOS                    | C    | A    | B     |       | C    |       |
| Approach Vol, veh/h          |      | 884  | 710   | A     | 108  | A     |
| Approach Delay, s/veh        |      | 8.2  | 14.4  |       | 20.2 |       |
| Approach LOS                 |      | A    | B     |       | C    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 14.8  | 23.1  | 10.7 | 37.9  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 30  | * 44  | 26.7 | * 81  |
| Max Q Clear Time (g_c+I1), s |      |      | 7.0   | 10.2  | 3.4  | 6.3   |
| Green Ext Time (p_c), s      |      |      | 0.5   | 5.6   | 0.3  | 5.7   |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 11.6  |       |      |       |
| HCM 6th LOS                  |      |      | B     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Open WE

09/25/2020

|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |  |
| Lane Configurations          |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |  |
| Traffic Volume (veh/h)       | 18                                                                                | 0                                                                                 | 19                                                                                | 3                                                                                 | 1                                                                                 | 1                                                                                 | 19                                                                                  | 379                                                                                 | 4                                                                                   | 1                                                                                   | 408                                                                                 | 34                                                                                  |  |
| Future Volume (veh/h)        | 18                                                                                | 0                                                                                 | 19                                                                                | 3                                                                                 | 1                                                                                 | 1                                                                                 | 19                                                                                  | 379                                                                                 | 4                                                                                   | 1                                                                                   | 408                                                                                 | 34                                                                                  |  |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |  |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |  |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |  |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |  |
| Adj Flow Rate, veh/h         | 20                                                                                | 0                                                                                 | 21                                                                                | 3                                                                                 | 1                                                                                 | 1                                                                                 | 21                                                                                  | 412                                                                                 | 4                                                                                   | 1                                                                                   | 443                                                                                 | 37                                                                                  |  |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |  |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |  |
| Cap, veh/h                   | 511                                                                               | 0                                                                                 | 500                                                                               | 168                                                                               | 55                                                                                | 34                                                                                | 351                                                                                 | 512                                                                                 | 5                                                                                   | 370                                                                                 | 518                                                                                 | 439                                                                                 |  |
| Arrive On Green              | 0.11                                                                              | 0.00                                                                              | 0.32                                                                              | 0.11                                                                              | 0.11                                                                              | 0.11                                                                              | 0.11                                                                                | 0.28                                                                                | 0.28                                                                                | 0.11                                                                                | 0.28                                                                                | 0.28                                                                                |  |
| Sat Flow, veh/h              | 1781                                                                              | 0                                                                                 | 1585                                                                              | 738                                                                               | 510                                                                               | 312                                                                               | 1781                                                                                | 1849                                                                                | 18                                                                                  | 1781                                                                                | 1870                                                                                | 1585                                                                                |  |
| Grp Volume(v), veh/h         | 20                                                                                | 0                                                                                 | 21                                                                                | 5                                                                                 | 0                                                                                 | 0                                                                                 | 21                                                                                  | 0                                                                                   | 416                                                                                 | 1                                                                                   | 443                                                                                 | 37                                                                                  |  |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1585                                                                              | 1560                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                                | 0                                                                                   | 1867                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |  |
| Q Serve(g_s), s              | 0.6                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 13.5                                                                                | 0.0                                                                                 | 14.6                                                                                | 1.1                                                                                 |  |
| Cycle Q Clear(g_c), s        | 0.6                                                                               | 0.0                                                                               | 0.6                                                                               | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.5                                                                                 | 0.0                                                                                 | 13.5                                                                                | 0.0                                                                                 | 14.6                                                                                | 1.1                                                                                 |  |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 0.60                                                                              |                                                                                   | 0.20                                                                              | 1.00                                                                                |                                                                                     | 0.01                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |  |
| Lane Grp Cap(c), veh/h       | 511                                                                               | 0                                                                                 | 500                                                                               | 257                                                                               | 0                                                                                 | 0                                                                                 | 351                                                                                 | 0                                                                                   | 517                                                                                 | 370                                                                                 | 518                                                                                 | 439                                                                                 |  |
| V/C Ratio(X)                 | 0.04                                                                              | 0.00                                                                              | 0.04                                                                              | 0.02                                                                              | 0.00                                                                              | 0.00                                                                              | 0.06                                                                                | 0.00                                                                                | 0.80                                                                                | 0.00                                                                                | 0.86                                                                                | 0.08                                                                                |  |
| Avail Cap(c_a), veh/h        | 511                                                                               | 0                                                                                 | 500                                                                               | 257                                                                               | 0                                                                                 | 0                                                                                 | 351                                                                                 | 0                                                                                   | 517                                                                                 | 370                                                                                 | 518                                                                                 | 439                                                                                 |  |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Uniform Delay (d), s/veh     | 18.7                                                                              | 0.0                                                                               | 15.4                                                                              | 25.9                                                                              | 0.0                                                                               | 0.0                                                                               | 14.1                                                                                | 0.0                                                                                 | 21.9                                                                                | 13.7                                                                                | 22.3                                                                                | 17.4                                                                                |  |
| Incr Delay (d2), s/veh       | 0.0                                                                               | 0.0                                                                               | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 12.5                                                                                | 0.0                                                                                 | 16.4                                                                                | 0.4                                                                                 |  |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |  |
| %ile BackOfQ(50%),veh/ln     | 0.2                                                                               | 0.0                                                                               | 0.2                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.2                                                                                 | 0.0                                                                                 | 7.2                                                                                 | 0.0                                                                                 | 8.3                                                                                 | 0.4                                                                                 |  |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| LnGrp Delay(d),s/veh         | 18.7                                                                              | 0.0                                                                               | 15.6                                                                              | 26.0                                                                              | 0.0                                                                               | 0.0                                                                               | 14.5                                                                                | 0.0                                                                                 | 34.4                                                                                | 13.7                                                                                | 38.7                                                                                | 17.8                                                                                |  |
| LnGrp LOS                    | B                                                                                 | A                                                                                 | B                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | B                                                                                   | A                                                                                   | C                                                                                   | B                                                                                   | D                                                                                   | B                                                                                   |  |
| Approach Vol, veh/h          | 41                                                                                |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   |                                                                                     | 437                                                                                 |                                                                                     |                                                                                     |                                                                                     | 481                                                                                 |  |
| Approach Delay, s/veh        | 17.1                                                                              |                                                                                   |                                                                                   | 26.0                                                                              |                                                                                   |                                                                                   |                                                                                     | 33.4                                                                                |                                                                                     |                                                                                     |                                                                                     | 37.0                                                                                |  |
| Approach LOS                 | B                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |                                                                                     | D                                                                                   |  |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Phs Duration (G+Y+Rc), s     | 13.5                                                                              | 24.5                                                                              | 13.5                                                                              | 13.5                                                                              | 13.5                                                                              | 24.5                                                                              | 27.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Change Period (Y+Rc), s      | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Max Green Setting (Gmax), s  | * 7                                                                               | * 18                                                                              | 7.0                                                                               | 7.0                                                                               | * 7                                                                               | * 18                                                                              | 20.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Max Q Clear Time (g_c+I1), s | 2.0                                                                               | 15.5                                                                              | 2.6                                                                               | 2.2                                                                               | 2.5                                                                               | 16.6                                                                              | 2.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Green Ext Time (p_c), s      | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.4                                                                               | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |

### Intersection Summary

HCM 6th Ctrl Delay 34.5

HCM 6th LOS C

### Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 4.4                                                                               |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 87                                                                                | 152                                                                               | 255                                                                               | 41   | 77                                                                                | 361                                                                               |
| Future Vol, veh/h        | 87                                                                                | 152                                                                               | 255                                                                               | 41   | 77                                                                                | 361                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 175                                                                               | -                                                                                 | -    | 250                                                                               | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 95                                                                                | 165                                                                               | 277                                                                               | 45   | 84                                                                                | 392                                                                               |
| Major/Minor              | Minor1                                                                            | Major1                                                                            | Major2                                                                            |      |                                                                                   |                                                                                   |
| Conflicting Flow All     | 860                                                                               | 300                                                                               | 0                                                                                 | 0    | 322                                                                               | 0                                                                                 |
| Stage 1                  | 300                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 560                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -    | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -    | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver       | 326                                                                               | 740                                                                               | -                                                                                 | -    | 1238                                                                              | -                                                                                 |
| Stage 1                  | 752                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 572                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Platoon blocked, %       |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver       | 304                                                                               | 740                                                                               | -                                                                                 | -    | 1238                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver       | 304                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 1                  | 752                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 533                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Approach                 | WB                                                                                | NB                                                                                | SB                                                                                |      |                                                                                   |                                                                                   |
| HCM Control Delay, s     | 15.2                                                                              | 0                                                                                 | 1.4                                                                               |      |                                                                                   |                                                                                   |
| HCM LOS                  | C                                                                                 |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1WBLn2                                                                     | SBL                                                                               | SBT  |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 304 740                                                                         | 1238                                                                              | -    |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.311 0.223                                                                     | 0.068                                                                             | -    |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | - 22.1 11.3                                                                       | 8.1                                                                               | -    |                                                                                   |                                                                                   |
| HCM Lane LOS             | -                                                                                 | - C B                                                                             | A                                                                                 | -    |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 1.3 0.9                                                                         | 0.2                                                                               | -    |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 15.1                                                                              |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 277                                                                               | 123                                                                               | 83                                                                                | 271  | 164                                                                               | 25                                                                                |
| Future Vol, veh/h        | 277                                                                               | 123                                                                               | 83                                                                                | 271  | 164                                                                               | 25                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 150                                                                               | -                                                                                 | -    | 75                                                                                | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 301                                                                               | 134                                                                               | 90                                                                                | 295  | 178                                                                               | 27                                                                                |
| Major/Minor              | Minor1                                                                            | Major1                                                                            | Major2                                                                            |      |                                                                                   |                                                                                   |
| Conflicting Flow All     | 621                                                                               | 238                                                                               | 0                                                                                 | 0    | 385                                                                               | 0                                                                                 |
| Stage 1                  | 238                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 383                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -    | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -    | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver       | 451                                                                               | 801                                                                               | -                                                                                 | -    | 1173                                                                              | -                                                                                 |
| Stage 1                  | 802                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 689                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Platoon blocked, %       |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver       | 382                                                                               | 801                                                                               | -                                                                                 | -    | 1173                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver       | 382                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 1                  | 802                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 584                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Approach                 | WB                                                                                | NB                                                                                | SB                                                                                |      |                                                                                   |                                                                                   |
| HCM Control Delay, s     | 32.1                                                                              | 0                                                                                 | 7.5                                                                               |      |                                                                                   |                                                                                   |
| HCM LOS                  | D                                                                                 |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1WBLn2                                                                     | SBL                                                                               | SBT  |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 382 801 1173                                                                    | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.788 0.167 0.152                                                               | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | - 41.7 10.4 8.6                                                                   | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Lane LOS             | -                                                                                 | - E B A                                                                           | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 6.7 0.6 0.5                                                                     | -                                                                                 | -    |                                                                                   |                                                                                   |



| Intersection             |                                                                                   |          |                                                                                   |       |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 2.1                                                                               |          |                                                                                   |       |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |       |       |  |
| Traffic Vol, veh/h       | 43                                                                                | 3        | 81                                                                                | 27    | 1     | 55                                                                                |
| Future Vol, veh/h        | 43                                                                                | 3        | 81                                                                                | 27    | 1     | 55                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0     | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free  | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None  | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -     | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92    | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2     | 2     | 2                                                                                 |
| Mvmt Flow                | 47                                                                                | 3        | 88                                                                                | 29    | 1     | 60                                                                                |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |       |       |                                                                                   |
| Conflicting Flow All     | 165                                                                               | 103      | 0                                                                                 | 0     | 117   | 0                                                                                 |
| Stage 1                  | 103                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 62                                                                                | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -     | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -     | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 826                                                                               | 952      | -                                                                                 | -     | 1471  | -                                                                                 |
| Stage 1                  | 921                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 961                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -     |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 825                                                                               | 952      | -                                                                                 | -     | 1471  | -                                                                                 |
| Mov Cap-2 Maneuver       | 825                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 1                  | 921                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 960                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |       |       |                                                                                   |
| HCM Control Delay, s     | 9.6                                                                               | 0        | 0.1                                                                               |       |       |                                                                                   |
| HCM LOS                  | A                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 832                                                                               | 1471  | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.06                                                                              | 0.001 | -     |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | -        | 9.6                                                                               | 7.4   | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | A                                                                                 | A     | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.2                                                                               | 0     | -     |                                                                                   |

# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Closed AM

09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 117                                                                               | 989                                                                               | 9                                                                                 | 0                                                                                 | 949                                                                               | 36                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 10                                                                                  | 0                                                                                   | 43                                                                                  |
| Future Volume (veh/h)                                                                              | 117                                                                               | 989                                                                               | 9                                                                                 | 0                                                                                 | 949                                                                               | 36                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 10                                                                                  | 0                                                                                   | 43                                                                                  |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 127                                                                               | 1075                                                                              | 10                                                                                | 0                                                                                 | 1032                                                                              | 39                                                                                | 3                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   | 47                                                                                  |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 165                                                                               | 1783                                                                              | 17                                                                                | 3                                                                                 | 1561                                                                              | 59                                                                                | 82                                                                                  | 589                                                                                 | 0                                                                                   | 346                                                                                 | 0                                                                                   | 270                                                                                 |
| Arrive On Green                                                                                    | 0.09                                                                              | 0.49                                                                              | 0.49                                                                              | 0.00                                                                              | 0.31                                                                              | 0.31                                                                              | 0.05                                                                                | 0.00                                                                                | 0.00                                                                                | 0.17                                                                                | 0.00                                                                                | 0.17                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3608                                                                              | 34                                                                                | 1781                                                                              | 5049                                                                              | 191                                                                               | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 127                                                                               | 529                                                                               | 556                                                                               | 0                                                                                 | 695                                                                               | 376                                                                               | 3                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   | 47                                                                                  |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1864                                                                              | 1781                                                                              | 1702                                                                              | 1836                                                                              | 1781                                                                                | 1870                                                                                | 0                                                                                   | 1418                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 4.8                                                                               | 14.9                                                                              | 14.9                                                                              | 0.0                                                                               | 12.3                                                                              | 12.3                                                                              | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 1.8                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 4.8                                                                               | 14.9                                                                              | 14.9                                                                              | 0.0                                                                               | 12.3                                                                              | 12.3                                                                              | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 1.8                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.02                                                                              | 1.00                                                                              |                                                                                   | 0.10                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 165                                                                               | 878                                                                               | 921                                                                               | 3                                                                                 | 1052                                                                              | 568                                                                               | 82                                                                                  | 589                                                                                 | 0                                                                                   | 346                                                                                 | 0                                                                                   | 270                                                                                 |
| V/C Ratio(X)                                                                                       | 0.77                                                                              | 0.60                                                                              | 0.60                                                                              | 0.00                                                                              | 0.66                                                                              | 0.66                                                                              | 0.04                                                                                | 0.00                                                                                | 0.00                                                                                | 0.03                                                                                | 0.00                                                                                | 0.17                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 402                                                                               | 1068                                                                              | 1121                                                                              | 180                                                                               | 1624                                                                              | 876                                                                               | 82                                                                                  | 589                                                                                 | 0                                                                                   | 346                                                                                 | 0                                                                                   | 270                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 30.7                                                                              | 12.6                                                                              | 12.6                                                                              | 0.0                                                                               | 20.7                                                                              | 20.8                                                                              | 31.5                                                                                | 0.0                                                                                 | 0.0                                                                                 | 24.0                                                                                | 0.0                                                                                 | 24.5                                                                                |
| Incr Delay (d2), s/veh                                                                             | 7.4                                                                               | 0.7                                                                               | 0.6                                                                               | 0.0                                                                               | 0.7                                                                               | 1.3                                                                               | 0.2                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.2                                                                                 | 0.0                                                                                 | 1.4                                                                                 |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 2.3                                                                               | 5.3                                                                               | 5.6                                                                               | 0.0                                                                               | 4.6                                                                               | 5.1                                                                               | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.2                                                                                 | 0.0                                                                                 | 0.7                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 38.1                                                                              | 13.3                                                                              | 13.2                                                                              | 0.0                                                                               | 21.5                                                                              | 22.1                                                                              | 31.7                                                                                | 0.0                                                                                 | 0.0                                                                                 | 24.2                                                                                | 0.0                                                                                 | 25.9                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | B                                                                                 | B                                                                                 | A                                                                                 | C                                                                                 | C                                                                                 | C                                                                                   | A                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   |
| Approach Vol, veh/h                                                                                | 1212                                                                              |                                                                                   |                                                                                   |                                                                                   | 1071                                                                              |                                                                                   | 3                                                                                   |                                                                                     |                                                                                     |                                                                                     | 58                                                                                  |                                                                                     |
| Approach Delay, s/veh                                                                              | 15.9                                                                              |                                                                                   |                                                                                   |                                                                                   | 21.7                                                                              |                                                                                   | 31.7                                                                                |                                                                                     |                                                                                     |                                                                                     | 25.6                                                                                |                                                                                     |
| Approach LOS                                                                                       | B                                                                                 |                                                                                   |                                                                                   |                                                                                   | C                                                                                 |                                                                                   | C                                                                                   |                                                                                     |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 |                                                                                   | 3                                                                                 |                                                                                   | 4                                                                                 |                                                                                   | 5                                                                                   |                                                                                     | 6                                                                                   |                                                                                     | 7                                                                                   |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 28.6                                                                              |                                                                                   | 12.8                                                                              |                                                                                   | 27.8                                                                              |                                                                                   | 10.0                                                                                |                                                                                     | 18.6                                                                                |                                                                                     | 0.0                                                                                 |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             |                                                                                   | * 6.4                                                                             |                                                                                   | * 6.4                                                                             |                                                                                   | * 6.8                                                                               |                                                                                     | * 6.8                                                                               |                                                                                     | * 6.4                                                                               |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 22                                                                              |                                                                                   | * 16                                                                              |                                                                                   | * 33                                                                              |                                                                                   | * 3.2                                                                               |                                                                                     | * 12                                                                                |                                                                                     | * 7                                                                                 |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                                                       | 0.0                                                                               |                                                                                   | 6.8                                                                               |                                                                                   | 14.3                                                                              |                                                                                   | 2.1                                                                                 |                                                                                     | 3.8                                                                                 |                                                                                     | 0.0                                                                                 |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               |                                                                                   | 0.2                                                                               |                                                                                   | 7.1                                                                               |                                                                                   | 0.0                                                                                 |                                                                                     | 0.1                                                                                 |                                                                                     | 0.0                                                                                 |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 18.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

2020 Bridge Closed AM

09/25/2020

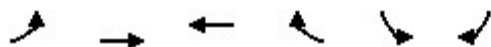
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|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)       | 317                                                                               | 577                                                                               | 36                                                                                | 10                                                                                | 743                                                                               | 297                                                                               | 22                                                                                  | 24                                                                                  | 12                                                                                  | 148                                                                                 | 4                                                                                   | 210                                                                                 |
| Future Volume (veh/h)        | 317                                                                               | 577                                                                               | 36                                                                                | 10                                                                                | 743                                                                               | 297                                                                               | 22                                                                                  | 24                                                                                  | 12                                                                                  | 148                                                                                 | 4                                                                                   | 210                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 345                                                                               | 627                                                                               | 39                                                                                | 11                                                                                | 808                                                                               | 323                                                                               | 24                                                                                  | 26                                                                                  | 13                                                                                  | 161                                                                                 | 4                                                                                   | 228                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 410                                                                               | 1026                                                                              | 64                                                                                | 455                                                                               | 908                                                                               | 769                                                                               | 100                                                                                 | 202                                                                                 | 101                                                                                 | 275                                                                                 | 5                                                                                   | 268                                                                                 |
| Arrive On Green              | 0.17                                                                              | 0.59                                                                              | 0.59                                                                              | 0.06                                                                              | 0.49                                                                              | 0.49                                                                              | 0.17                                                                                | 0.17                                                                                | 0.17                                                                                | 0.17                                                                                | 0.17                                                                                | 0.17                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 1742                                                                              | 108                                                                               | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1148                                                                                | 1176                                                                                | 588                                                                                 | 1368                                                                                | 27                                                                                  | 1562                                                                                |
| Grp Volume(v), veh/h         | 345                                                                               | 0                                                                                 | 666                                                                               | 11                                                                                | 808                                                                               | 323                                                                               | 24                                                                                  | 0                                                                                   | 39                                                                                  | 161                                                                                 | 0                                                                                   | 232                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1851                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1148                                                                                | 0                                                                                   | 1764                                                                                | 1368                                                                                | 0                                                                                   | 1589                                                                                |
| Q Serve(g_s), s              | 13.4                                                                              | 0.0                                                                               | 25.4                                                                              | 0.3                                                                               | 43.0                                                                              | 14.5                                                                              | 2.3                                                                                 | 0.0                                                                                 | 2.1                                                                                 | 12.4                                                                                | 0.0                                                                                 | 15.6                                                                                |
| Cycle Q Clear(g_c), s        | 13.4                                                                              | 0.0                                                                               | 25.4                                                                              | 0.3                                                                               | 43.0                                                                              | 14.5                                                                              | 17.8                                                                                | 0.0                                                                                 | 2.1                                                                                 | 14.5                                                                                | 0.0                                                                                 | 15.6                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 0.06                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.33                                                                                | 1.00                                                                                |                                                                                     | 0.98                                                                                |
| Lane Grp Cap(c), veh/h       | 410                                                                               | 0                                                                                 | 1090                                                                              | 455                                                                               | 908                                                                               | 769                                                                               | 100                                                                                 | 0                                                                                   | 303                                                                                 | 275                                                                                 | 0                                                                                   | 273                                                                                 |
| V/C Ratio(X)                 | 0.84                                                                              | 0.00                                                                              | 0.61                                                                              | 0.02                                                                              | 0.89                                                                              | 0.42                                                                              | 0.24                                                                                | 0.00                                                                                | 0.13                                                                                | 0.59                                                                                | 0.00                                                                                | 0.85                                                                                |
| Avail Cap(c_a), veh/h        | 410                                                                               | 0                                                                                 | 1090                                                                              | 455                                                                               | 908                                                                               | 769                                                                               | 100                                                                                 | 0                                                                                   | 303                                                                                 | 275                                                                                 | 0                                                                                   | 273                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 29.1                                                                              | 0.0                                                                               | 14.5                                                                              | 12.2                                                                              | 25.6                                                                              | 18.3                                                                              | 52.8                                                                                | 0.0                                                                                 | 38.6                                                                                | 44.7                                                                                | 0.0                                                                                 | 44.2                                                                                |
| Incr Delay (d2), s/veh       | 18.4                                                                              | 0.0                                                                               | 2.6                                                                               | 0.1                                                                               | 12.7                                                                              | 1.7                                                                               | 5.6                                                                                 | 0.0                                                                                 | 0.9                                                                                 | 8.8                                                                                 | 0.0                                                                                 | 26.7                                                                                |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 6.4                                                                               | 0.0                                                                               | 10.8                                                                              | 0.1                                                                               | 21.5                                                                              | 5.6                                                                               | 0.8                                                                                 | 0.0                                                                                 | 1.0                                                                                 | 4.9                                                                                 | 0.0                                                                                 | 8.1                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 47.5                                                                              | 0.0                                                                               | 17.1                                                                              | 12.3                                                                              | 38.4                                                                              | 20.0                                                                              | 58.4                                                                                | 0.0                                                                                 | 39.5                                                                                | 53.5                                                                                | 0.0                                                                                 | 70.9                                                                                |
| LnGrp LOS                    | D                                                                                 | A                                                                                 | B                                                                                 | B                                                                                 | D                                                                                 | B                                                                                 | E                                                                                   | A                                                                                   | D                                                                                   | D                                                                                   | A                                                                                   | E                                                                                   |
| Approach Vol, veh/h          | 1011                                                                              |                                                                                   |                                                                                   | 1142                                                                              |                                                                                   |                                                                                   | 63                                                                                  |                                                                                     |                                                                                     | 393                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 27.4                                                                              |                                                                                   |                                                                                   | 32.9                                                                              |                                                                                   |                                                                                   | 46.7                                                                                |                                                                                     |                                                                                     | 63.8                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | D                                                                                   |                                                                                     |                                                                                     | E                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 2                                                                                 |                                                                                   | 3                                                                                 | 4                                                                                 |                                                                                   | 6                                                                                 |                                                                                     | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 25.0                                                                              |                                                                                   | 25.0                                                                              | 60.0                                                                              |                                                                                   | 25.0                                                                              |                                                                                     | 13.6                                                                                | 71.4                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | 6.1                                                                               |                                                                                   | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.1                                                                               |                                                                                     | 6.6                                                                                 | 6.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | 18.9                                                                              |                                                                                   | 18.4                                                                              | 53.4                                                                              |                                                                                   | 18.9                                                                              |                                                                                     | 7.0                                                                                 | 64.8                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 19.8                                                                              |                                                                                   | 15.4                                                                              | 45.0                                                                              |                                                                                   | 17.6                                                                              |                                                                                     | 2.3                                                                                 | 27.4                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               |                                                                                   | 0.3                                                                               | 4.4                                                                               |                                                                                   | 0.3                                                                               |                                                                                     | 0.0                                                                                 | 5.4                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay           | 35.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                  | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Closed AM

09/25/2020



| Movement                     | EBL   | EBT  | WBT  | WBR  | SBL   | SBR   |
|------------------------------|-------|------|------|------|-------|-------|
| Lane Configurations          |       |      |      |      |       |       |
| Traffic Volume (veh/h)       | 185   | 525  | 968  | 466  | 370   | 262   |
| Future Volume (veh/h)        | 185   | 525  | 968  | 466  | 370   | 262   |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00  |      |      | 1.00 | 1.00  | 1.00  |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach        |       | No   | No   |      | No    |       |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870 | 1870 | 1870 | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 201   | 571  | 1052 | 0    | 402   | 0     |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92  |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2     | 2     |
| Cap, veh/h                   | 215   | 1342 | 1106 |      | 333   |       |
| Arrive On Green              | 0.08  | 0.72 | 0.59 | 0.00 | 0.19  | 0.00  |
| Sat Flow, veh/h              | 1781  | 1870 | 1870 | 0    | 1781  | 1585  |
| Grp Volume(v), veh/h         | 201   | 571  | 1052 | 0    | 402   | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870 | 1870 | 0    | 1781  | 1585  |
| Q Serve(g_s), s              | 8.9   | 16.7 | 70.6 | 0.0  | 25.1  | 0.0   |
| Cycle Q Clear(g_c), s        | 8.9   | 16.7 | 70.6 | 0.0  | 25.1  | 0.0   |
| Prop In Lane                 | 1.00  |      |      | 0.00 | 1.00  | 1.00  |
| Lane Grp Cap(c), veh/h       | 215   | 1342 | 1106 |      | 333   |       |
| V/C Ratio(X)                 | 0.94  | 0.43 | 0.95 |      | 1.21  |       |
| Avail Cap(c_a), veh/h        | 215   | 1438 | 1185 |      | 333   |       |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.00 | 1.00  | 0.00  |
| Uniform Delay (d), s/veh     | 59.3  | 7.7  | 25.7 | 0.0  | 54.6  | 0.0   |
| Incr Delay (d2), s/veh       | 43.7  | 0.2  | 15.4 | 0.0  | 118.1 | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 9.4   | 6.3  | 34.5 | 0.0  | 22.2  | 0.0   |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |       |
| LnGrp Delay(d),s/veh         | 103.0 | 7.9  | 41.1 | 0.0  | 172.7 | 0.0   |
| LnGrp LOS                    | F     | A    | D    |      | F     |       |
| Approach Vol, veh/h          |       | 772  | 1052 | A    | 402   | A     |
| Approach Delay, s/veh        |       | 32.7 | 41.1 |      | 172.7 |       |
| Approach LOS                 |       | C    | D    |      | F     |       |
| Timer - Assigned Phs         |       |      | 3    | 4    | 6     | 8     |
| Phs Duration (G+Y+Rc), s     |       |      | 17.0 | 86.3 | 31.0  | 103.3 |
| Change Period (Y+Rc), s      |       |      | 6.9  | 6.9  | 5.9   | * 6.9 |
| Max Green Setting (Gmax), s  |       |      | 10.1 | 85.1 | 25.1  | * 1E2 |
| Max Q Clear Time (g_c+I1), s |       |      | 10.9 | 72.6 | 27.1  | 18.7  |
| Green Ext Time (p_c), s      |       |      | 0.0  | 6.8  | 0.0   | 4.5   |
| <b>Intersection Summary</b>  |       |      |      |      |       |       |
| HCM 6th Ctrl Delay           |       |      | 61.9 |      |       |       |
| HCM 6th LOS                  |       |      | E    |      |       |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

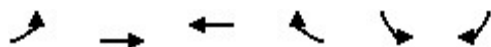
Unsignalized Delay for [EBT, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Closed AM

09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 157  | 700  | 869   | 120   | 59   | 506   |
| Future Volume (veh/h)        | 157  | 700  | 869   | 120   | 59   | 506   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 171  | 761  | 945   | 0     | 64   | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 243  | 2407 | 1425  |       | 280  |       |
| Arrive On Green              | 0.14 | 0.68 | 0.40  | 0.00  | 0.08 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 171  | 761  | 945   | 0     | 64   | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 4.8  | 4.6  | 11.3  | 0.0   | 0.9  | 0.0   |
| Cycle Q Clear(g_c), s        | 4.8  | 4.6  | 11.3  | 0.0   | 0.9  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 243  | 2407 | 1425  |       | 280  |       |
| V/C Ratio(X)                 | 0.70 | 0.32 | 0.66  |       | 0.23 |       |
| Avail Cap(c_a), veh/h        | 638  | 4474 | 2704  |       | 2762 |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 21.5 | 3.5  | 12.8  | 0.0   | 22.4 | 0.0   |
| Incr Delay (d2), s/veh       | 3.7  | 0.1  | 0.5   | 0.0   | 0.4  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.1  | 0.9  | 3.8   | 0.0   | 0.4  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 25.2 | 3.5  | 13.3  | 0.0   | 22.9 | 0.0   |
| LnGrp LOS                    | C    | A    | B     |       | C    |       |
| Approach Vol, veh/h          |      | 932  | 945   | A     | 64   | A     |
| Approach Delay, s/veh        |      | 7.5  | 13.3  |       | 22.9 |       |
| Approach LOS                 |      | A    | B     |       | C    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 14.4  | 28.2  | 9.5  | 42.7  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 19  | * 40  | 41.7 | * 66  |
| Max Q Clear Time (g_c+I1), s |      |      | 6.8   | 13.3  | 2.9  | 6.6   |
| Green Ext Time (p_c), s      |      |      | 0.3   | 7.6   | 0.2  | 6.5   |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 10.8  |       |      |       |
| HCM 6th LOS                  |      |      | B     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Closed AM

09/25/2020

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 237                                                                               | 0                                                                                 | 56                                                                                | 1                                                                                 | 1                                                                                 | 4                                                                                 | 147                                                                                 | 505                                                                                 | 1                                                                                   | 0                                                                                   | 555                                                                                 | 243                                                                                 |
| Future Volume (veh/h)        | 237                                                                               | 0                                                                                 | 56                                                                                | 1                                                                                 | 1                                                                                 | 4                                                                                 | 147                                                                                 | 505                                                                                 | 1                                                                                   | 0                                                                                   | 555                                                                                 | 243                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 258                                                                               | 0                                                                                 | 61                                                                                | 1                                                                                 | 1                                                                                 | 4                                                                                 | 160                                                                                 | 549                                                                                 | 1                                                                                   | 0                                                                                   | 603                                                                                 | 264                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 455                                                                               | 0                                                                                 | 444                                                                               | 65                                                                                | 42                                                                                | 102                                                                               | 304                                                                                 | 684                                                                                 | 1                                                                                   | 350                                                                                 | 686                                                                                 | 581                                                                                 |
| Arrive On Green              | 0.10                                                                              | 0.00                                                                              | 0.28                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                              | 0.09                                                                                | 0.37                                                                                | 0.37                                                                                | 0.00                                                                                | 0.37                                                                                | 0.37                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 0                                                                                 | 1585                                                                              | 94                                                                                | 451                                                                               | 1091                                                                              | 1781                                                                                | 1866                                                                                | 3                                                                                   | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Grp Volume(v), veh/h         | 258                                                                               | 0                                                                                 | 61                                                                                | 6                                                                                 | 0                                                                                 | 0                                                                                 | 160                                                                                 | 0                                                                                   | 550                                                                                 | 0                                                                                   | 603                                                                                 | 264                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1585                                                                              | 1637                                                                              | 0                                                                                 | 0                                                                                 | 1781                                                                                | 0                                                                                   | 1870                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Q Serve(g_s), s              | 7.5                                                                               | 0.0                                                                               | 2.2                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 4.0                                                                                 | 0.0                                                                                 | 19.8                                                                                | 0.0                                                                                 | 22.6                                                                                | 9.5                                                                                 |
| Cycle Q Clear(g_c), s        | 7.5                                                                               | 0.0                                                                               | 2.2                                                                               | 0.2                                                                               | 0.0                                                                               | 0.0                                                                               | 4.0                                                                                 | 0.0                                                                                 | 19.8                                                                                | 0.0                                                                                 | 22.6                                                                                | 9.5                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 0.17                                                                              |                                                                                   | 0.67                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h       | 455                                                                               | 0                                                                                 | 444                                                                               | 209                                                                               | 0                                                                                 | 0                                                                                 | 304                                                                                 | 0                                                                                   | 686                                                                                 | 350                                                                                 | 686                                                                                 | 581                                                                                 |
| V/C Ratio(X)                 | 0.57                                                                              | 0.00                                                                              | 0.14                                                                              | 0.03                                                                              | 0.00                                                                              | 0.00                                                                              | 0.53                                                                                | 0.00                                                                                | 0.80                                                                                | 0.00                                                                                | 0.88                                                                                | 0.45                                                                                |
| Avail Cap(c_a), veh/h        | 455                                                                               | 0                                                                                 | 444                                                                               | 209                                                                               | 0                                                                                 | 0                                                                                 | 304                                                                                 | 0                                                                                   | 686                                                                                 | 350                                                                                 | 686                                                                                 | 581                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 26.7                                                                              | 0.0                                                                               | 20.2                                                                              | 30.9                                                                              | 0.0                                                                               | 0.0                                                                               | 16.4                                                                                | 0.0                                                                                 | 21.3                                                                                | 0.0                                                                                 | 22.2                                                                                | 18.0                                                                                |
| Incr Delay (d2), s/veh       | 1.7                                                                               | 0.0                                                                               | 0.6                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 6.4                                                                                 | 0.0                                                                                 | 9.6                                                                                 | 0.0                                                                                 | 15.0                                                                                | 2.6                                                                                 |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 4.2                                                                               | 0.0                                                                               | 0.8                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 2.0                                                                                 | 0.0                                                                                 | 9.9                                                                                 | 0.0                                                                                 | 12.0                                                                                | 3.7                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 28.3                                                                              | 0.0                                                                               | 20.9                                                                              | 31.0                                                                              | 0.0                                                                               | 0.0                                                                               | 22.8                                                                                | 0.0                                                                                 | 30.9                                                                                | 0.0                                                                                 | 37.2                                                                                | 20.6                                                                                |
| LnGrp LOS                    | C                                                                                 | A                                                                                 | C                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | C                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | D                                                                                   | C                                                                                   |
| Approach Vol, veh/h          | 319                                                                               |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 710                                                                                 |                                                                                     |                                                                                     | 867                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 26.9                                                                              |                                                                                   |                                                                                   | 31.0                                                                              |                                                                                   |                                                                                   | 29.1                                                                                |                                                                                     |                                                                                     | 32.1                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 13.5                                                                              | 34.0                                                                              | 14.0                                                                              | 13.5                                                                              | 13.5                                                                              | 34.0                                                                              | 27.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | * 7                                                                               | * 28                                                                              | 7.5                                                                               | 7.0                                                                               | * 7                                                                               | * 28                                                                              | 21.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 0.0                                                                               | 21.8                                                                              | 9.5                                                                               | 2.2                                                                               | 6.0                                                                               | 24.6                                                                              | 4.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 1.7                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.4                                                                               | 0.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

### Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 30.1 |
| HCM 6th LOS        | C    |

### Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 2.2                                                                               |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 52                                                                                | 1                                                                                 | 641                                                                               | 9    | 44                                                                                | 574                                                                               |
| Future Vol, veh/h        | 52                                                                                | 1                                                                                 | 641                                                                               | 9    | 44                                                                                | 574                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 175                                                                               | -                                                                                 | -    | 250                                                                               | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 57                                                                                | 1                                                                                 | 697                                                                               | 10   | 48                                                                                | 624                                                                               |
| Major/Minor              | Minor1                                                                            | Major1                                                                            | Major2                                                                            |      |                                                                                   |                                                                                   |
| Conflicting Flow All     | 1422                                                                              | 702                                                                               | 0                                                                                 | 0    | 707                                                                               | 0                                                                                 |
| Stage 1                  | 702                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 720                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -    | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -    | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver       | 150                                                                               | 438                                                                               | -                                                                                 | -    | 891                                                                               | -                                                                                 |
| Stage 1                  | 491                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 482                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Platoon blocked, %       |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver       | 142                                                                               | 438                                                                               | -                                                                                 | -    | 891                                                                               | -                                                                                 |
| Mov Cap-2 Maneuver       | 142                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 1                  | 491                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 456                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Approach                 | WB                                                                                | NB                                                                                | SB                                                                                |      |                                                                                   |                                                                                   |
| HCM Control Delay, s     | 45.6                                                                              | 0                                                                                 | 0.7                                                                               |      |                                                                                   |                                                                                   |
| HCM LOS                  | E                                                                                 |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1WBLn2                                                                     | SBL                                                                               | SBT  |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 142 438                                                                         | 891                                                                               | -    |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.398 0.002                                                                     | 0.054                                                                             | -    |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | - 46.2 13.2                                                                       | 9.3                                                                               | -    |                                                                                   |                                                                                   |
| HCM Lane LOS             | -                                                                                 | - E B                                                                             | A                                                                                 | -    |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 1.7 0                                                                           | 0.2                                                                               | -    |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0                                                                                 |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR                                                                               | NBL   | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |  |       |  |  |  |
| Traffic Vol, veh/h       | 0                                                                                 | 0                                                                                 | 0     | 280                                                                               | 559                                                                               | 0                                                                                 |
| Future Vol, veh/h        | 0                                                                                 | 0                                                                                 | 0     | 280                                                                               | 559                                                                               | 0                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0     | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Yield                                                                             | Yield                                                                             | Free  | Free                                                                              | Stop                                                                              | Stop                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -     | None                                                                              | -                                                                                 | Yield                                                                             |
| Storage Length           | 75                                                                                | 0                                                                                 | -     | -                                                                                 | -                                                                                 | 150                                                                               |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92    | 92                                                                                | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2     | 2                                                                                 | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 0                                                                                 | 0     | 304                                                                               | 608                                                                               | 0                                                                                 |
| Major/Minor              |                                                                                   | Major1                                                                            |       | Minor2                                                                            |                                                                                   |                                                                                   |
| Conflicting Flow All     |                                                                                   | 0                                                                                 | 0     | 304                                                                               | 0                                                                                 |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 | -     | 0                                                                                 | -                                                                                 |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 | -     | 304                                                                               | -                                                                                 |                                                                                   |
| Critical Hdwy            |                                                                                   | 4.12                                                                              | -     | 6.52                                                                              | 6.22                                                                              |                                                                                   |
| Critical Hdwy Stg 1      |                                                                                   | -                                                                                 | -     | -                                                                                 | -                                                                                 |                                                                                   |
| Critical Hdwy Stg 2      |                                                                                   | -                                                                                 | -     | 5.52                                                                              | -                                                                                 |                                                                                   |
| Follow-up Hdwy           |                                                                                   | 2.218                                                                             | -     | 4.018                                                                             | 3.318                                                                             |                                                                                   |
| Pot Cap-1 Maneuver       |                                                                                   | -                                                                                 | -     | 609                                                                               | -                                                                                 |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 | -     | -                                                                                 | -                                                                                 |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 | -     | 663                                                                               | -                                                                                 |                                                                                   |
| Platoon blocked, %       |                                                                                   | -                                                                                 | -     | -                                                                                 | -                                                                                 |                                                                                   |
| Mov Cap-1 Maneuver       |                                                                                   | -                                                                                 | -     | 0                                                                                 | -                                                                                 |                                                                                   |
| Mov Cap-2 Maneuver       |                                                                                   | -                                                                                 | -     | 0                                                                                 | -                                                                                 |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 | -     | 0                                                                                 | -                                                                                 |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 | -     | 0                                                                                 | -                                                                                 |                                                                                   |
| Approach                 |                                                                                   | NB                                                                                |       | SB                                                                                |                                                                                   |                                                                                   |
| HCM Control Delay, s     |                                                                                   | 0                                                                                 |       |                                                                                   |                                                                                   |                                                                                   |
| HCM LOS                  |                                                                                   |                                                                                   |       | -                                                                                 |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT                                                                               | SBLn1 | SBLn2                                                                             |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | 0                                                                                 | -                                                                                 | -     | 0                                                                                 |                                                                                   |                                                                                   |
| HCM Lane LOS             | A                                                                                 | -                                                                                 | -     | A                                                                                 |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |



| Intersection             |                                                                                   |       |                                                                                   |          |        |                                                                                   |   |
|--------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|----------|--------|-----------------------------------------------------------------------------------|---|
| Int Delay, s/veh         | 3.7                                                                               |       |                                                                                   |          |        |                                                                                   |   |
| Movement                 | WBL                                                                               | WBR   | NBT                                                                               | NBR      | SBL    | SBT                                                                               |   |
| Lane Configurations      |  |       |  |          |        |  |   |
| Traffic Vol, veh/h       | 99                                                                                | 0     | 37                                                                                | 21       | 1      | 114                                                                               |   |
| Future Vol, veh/h        | 99                                                                                | 0     | 37                                                                                | 21       | 1      | 114                                                                               |   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0     | 0                                                                                 | 0        | 0      | 0                                                                                 |   |
| Sign Control             | Stop                                                                              | Stop  | Free                                                                              | Free     | Free   | Free                                                                              |   |
| RT Channelized           | -                                                                                 | None  | -                                                                                 | None     | -      | None                                                                              |   |
| Storage Length           | 0                                                                                 | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Veh in Median Storage, # | 0                                                                                 | -     | 0                                                                                 | -        | -      | 0                                                                                 |   |
| Grade, %                 | 0                                                                                 | -     | 0                                                                                 | -        | -      | 0                                                                                 |   |
| Peak Hour Factor         | 92                                                                                | 92    | 92                                                                                | 92       | 92     | 92                                                                                |   |
| Heavy Vehicles, %        | 2                                                                                 | 2     | 2                                                                                 | 2        | 2      | 2                                                                                 |   |
| Mvmt Flow                | 108                                                                               | 0     | 40                                                                                | 23       | 1      | 124                                                                               |   |
|                          |                                                                                   |       |                                                                                   |          |        |                                                                                   |   |
| Major/Minor              | Minor1                                                                            |       | Major1                                                                            |          | Major2 |                                                                                   |   |
| Conflicting Flow All     | 178                                                                               | 52    | 0                                                                                 | 0        | 63     | 0                                                                                 |   |
| Stage 1                  | 52                                                                                | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Stage 2                  | 126                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Critical Hdwy            | 6.42                                                                              | 6.22  | -                                                                                 | -        | 4.12   | -                                                                                 |   |
| Critical Hdwy Stg 1      | 5.42                                                                              | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Critical Hdwy Stg 2      | 5.42                                                                              | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Follow-up Hdwy           | 3.518                                                                             | 3.318 | -                                                                                 | -        | 2.218  | -                                                                                 |   |
| Pot Cap-1 Maneuver       | 812                                                                               | 1016  | -                                                                                 | -        | 1540   | -                                                                                 |   |
| Stage 1                  | 970                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Stage 2                  | 900                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Platoon blocked, %       |                                                                                   |       | -                                                                                 | -        |        | -                                                                                 |   |
| Mov Cap-1 Maneuver       | 811                                                                               | 1016  | -                                                                                 | -        | 1540   | -                                                                                 |   |
| Mov Cap-2 Maneuver       | 811                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Stage 1                  | 970                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
| Stage 2                  | 899                                                                               | -     | -                                                                                 | -        | -      | -                                                                                 |   |
|                          |                                                                                   |       |                                                                                   |          |        |                                                                                   |   |
|                          |                                                                                   |       |                                                                                   |          |        |                                                                                   |   |
| Approach                 | WB                                                                                |       | NB                                                                                |          | SB     |                                                                                   |   |
| HCM Control Delay, s     | 10.1                                                                              |       | 0                                                                                 |          | 0.1    |                                                                                   |   |
| HCM LOS                  | B                                                                                 |       |                                                                                   |          |        |                                                                                   |   |
|                          |                                                                                   |       |                                                                                   |          |        |                                                                                   |   |
| Minor Lane/Major Mvmt    |                                                                                   |       | NBT                                                                               | NBRWBLn1 | SBL    | SBT                                                                               |   |
| Capacity (veh/h)         |                                                                                   |       | -                                                                                 | -        | 811    | 1540                                                                              | - |
| HCM Lane V/C Ratio       |                                                                                   |       | -                                                                                 | -        | 0.133  | 0.001                                                                             | - |
| HCM Control Delay (s)    |                                                                                   |       | -                                                                                 | -        | 10.1   | 7.3                                                                               | 0 |
| HCM Lane LOS             |                                                                                   |       | -                                                                                 | -        | B      | A                                                                                 | A |
| HCM 95th %tile Q(veh)    |                                                                                   |       | -                                                                                 | -        | 0.5    | 0                                                                                 | - |

# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Closed PM

09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 173                                                                               | 1200                                                                              | 6                                                                                 | 1                                                                                 | 1067                                                                              | 41                                                                                | 24                                                                                  | 1                                                                                   | 3                                                                                   | 73                                                                                  | 0                                                                                   | 179                                                                                 |
| Future Volume (veh/h)                                                                              | 173                                                                               | 1200                                                                              | 6                                                                                 | 1                                                                                 | 1067                                                                              | 41                                                                                | 24                                                                                  | 1                                                                                   | 3                                                                                   | 73                                                                                  | 0                                                                                   | 179                                                                                 |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 188                                                                               | 1304                                                                              | 7                                                                                 | 1                                                                                 | 1160                                                                              | 45                                                                                | 26                                                                                  | 1                                                                                   | 3                                                                                   | 79                                                                                  | 0                                                                                   | 195                                                                                 |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 232                                                                               | 1582                                                                              | 8                                                                                 | 3                                                                                 | 1553                                                                              | 60                                                                                | 97                                                                                  | 127                                                                                 | 381                                                                                 | 325                                                                                 | 0                                                                                   | 263                                                                                 |
| Arrive On Green                                                                                    | 0.13                                                                              | 0.44                                                                              | 0.44                                                                              | 0.00                                                                              | 0.31                                                                              | 0.31                                                                              | 0.05                                                                                | 0.31                                                                                | 0.31                                                                                | 0.17                                                                                | 0.00                                                                                | 0.17                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3624                                                                              | 19                                                                                | 1781                                                                              | 5044                                                                              | 196                                                                               | 1781                                                                                | 412                                                                                 | 1236                                                                                | 1412                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 188                                                                               | 639                                                                               | 672                                                                               | 1                                                                                 | 783                                                                               | 422                                                                               | 26                                                                                  | 0                                                                                   | 4                                                                                   | 79                                                                                  | 0                                                                                   | 195                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1867                                                                              | 1781                                                                              | 1702                                                                              | 1835                                                                              | 1781                                                                                | 0                                                                                   | 1648                                                                                | 1412                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 7.9                                                                               | 24.5                                                                              | 24.5                                                                              | 0.0                                                                               | 16.0                                                                              | 16.0                                                                              | 1.1                                                                                 | 0.0                                                                                 | 0.1                                                                                 | 3.8                                                                                 | 0.0                                                                                 | 9.0                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 7.9                                                                               | 24.5                                                                              | 24.5                                                                              | 0.0                                                                               | 16.0                                                                              | 16.0                                                                              | 1.1                                                                                 | 0.0                                                                                 | 0.1                                                                                 | 4.0                                                                                 | 0.0                                                                                 | 9.0                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.01                                                                              | 1.00                                                                              |                                                                                   | 0.11                                                                              | 1.00                                                                                |                                                                                     | 0.75                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 232                                                                               | 775                                                                               | 815                                                                               | 3                                                                                 | 1048                                                                              | 565                                                                               | 97                                                                                  | 0                                                                                   | 508                                                                                 | 325                                                                                 | 0                                                                                   | 263                                                                                 |
| V/C Ratio(X)                                                                                       | 0.81                                                                              | 0.82                                                                              | 0.82                                                                              | 0.29                                                                              | 0.75                                                                              | 0.75                                                                              | 0.27                                                                                | 0.00                                                                                | 0.01                                                                                | 0.24                                                                                | 0.00                                                                                | 0.74                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 410                                                                               | 911                                                                               | 957                                                                               | 161                                                                               | 1269                                                                              | 684                                                                               | 97                                                                                  | 0                                                                                   | 508                                                                                 | 325                                                                                 | 0                                                                                   | 263                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 32.7                                                                              | 19.2                                                                              | 19.2                                                                              | 38.5                                                                              | 24.0                                                                              | 24.0                                                                              | 35.1                                                                                | 0.0                                                                                 | 18.5                                                                                | 28.6                                                                                | 0.0                                                                                 | 30.7                                                                                |
| Incr Delay (d2), s/veh                                                                             | 6.6                                                                               | 5.4                                                                               | 5.2                                                                               | 41.4                                                                              | 2.0                                                                               | 3.6                                                                               | 1.5                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.8                                                                                 | 0.0                                                                                 | 17.2                                                                                |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 3.7                                                                               | 10.4                                                                              | 10.8                                                                              | 0.1                                                                               | 6.4                                                                               | 7.1                                                                               | 0.5                                                                                 | 0.0                                                                                 | 0.1                                                                                 | 1.4                                                                                 | 0.0                                                                                 | 4.6                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 39.3                                                                              | 24.6                                                                              | 24.4                                                                              | 79.9                                                                              | 26.0                                                                              | 27.7                                                                              | 36.5                                                                                | 0.0                                                                                 | 18.6                                                                                | 30.4                                                                                | 0.0                                                                                 | 47.9                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | C                                                                                 | C                                                                                 | E                                                                                 | C                                                                                 | C                                                                                 | D                                                                                   | A                                                                                   | B                                                                                   | C                                                                                   | A                                                                                   | D                                                                                   |
| Approach Vol, veh/h                                                                                | 1499                                                                              |                                                                                   |                                                                                   | 1206                                                                              |                                                                                   |                                                                                   | 30                                                                                  |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                                                              | 26.3                                                                              |                                                                                   |                                                                                   | 26.6                                                                              |                                                                                   |                                                                                   | 34.1                                                                                |                                                                                     |                                                                                     | 42.8                                                                                |                                                                                     |                                                                                     |
| Approach LOS                                                                                       | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | D                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 |                                                                                   | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 30.6                                                                              |                                                                                   | 16.5                                                                              | 30.2                                                                              | 11.0                                                                              | 19.6                                                                              | 6.5                                                                                 | 40.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             |                                                                                   | * 6.4                                                                             | * 6.4                                                                             | * 6.8                                                                             | * 6.8                                                                             | * 6.4                                                                               | * 6.4                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 24                                                                              |                                                                                   | * 18                                                                              | * 29                                                                              | * 4.2                                                                             | * 13                                                                              | * 7                                                                                 | * 40                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+l1), s                                                                       | 2.1                                                                               |                                                                                   | 9.9                                                                               | 18.0                                                                              | 3.1                                                                               | 11.0                                                                              | 2.0                                                                                 | 26.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               |                                                                                   | 0.3                                                                               | 5.8                                                                               | 0.0                                                                               | 0.2                                                                               | 0.0                                                                                 | 7.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 28.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

2020 Bridge Closed PM

09/25/2020

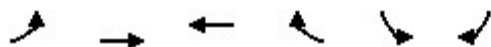
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|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)       | 96                                                                                | 1055                                                                              | 83                                                                                | 61                                                                                | 918                                                                               | 129                                                                               | 73                                                                                  | 7                                                                                   | 104                                                                                 | 138                                                                                 | 7                                                                                   | 154                                                                                 |
| Future Volume (veh/h)        | 96                                                                                | 1055                                                                              | 83                                                                                | 61                                                                                | 918                                                                               | 129                                                                               | 73                                                                                  | 7                                                                                   | 104                                                                                 | 138                                                                                 | 7                                                                                   | 154                                                                                 |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h         | 104                                                                               | 1147                                                                              | 90                                                                                | 66                                                                                | 998                                                                               | 140                                                                               | 79                                                                                  | 8                                                                                   | 113                                                                                 | 150                                                                                 | 8                                                                                   | 167                                                                                 |
| Peak Hour Factor             | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                   | 283                                                                               | 1142                                                                              | 90                                                                                | 140                                                                               | 1246                                                                              | 1056                                                                              | 99                                                                                  | 15                                                                                  | 217                                                                                 | 147                                                                                 | 11                                                                                  | 221                                                                                 |
| Arrive On Green              | 0.05                                                                              | 0.67                                                                              | 0.67                                                                              | 0.05                                                                              | 0.67                                                                              | 0.67                                                                              | 0.14                                                                                | 0.14                                                                                | 0.14                                                                                | 0.14                                                                                | 0.14                                                                                | 0.14                                                                                |
| Sat Flow, veh/h              | 1781                                                                              | 1712                                                                              | 134                                                                               | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1210                                                                                | 106                                                                                 | 1495                                                                                | 1270                                                                                | 73                                                                                  | 1523                                                                                |
| Grp Volume(v), veh/h         | 104                                                                               | 0                                                                                 | 1237                                                                              | 66                                                                                | 998                                                                               | 140                                                                               | 79                                                                                  | 0                                                                                   | 121                                                                                 | 150                                                                                 | 0                                                                                   | 175                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1781                                                                              | 0                                                                                 | 1846                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1210                                                                                | 0                                                                                   | 1601                                                                                | 1270                                                                                | 0                                                                                   | 1596                                                                                |
| Q Serve(g_s), s              | 2.5                                                                               | 0.0                                                                               | 93.4                                                                              | 1.5                                                                               | 53.4                                                                              | 4.5                                                                               | 5.6                                                                                 | 0.0                                                                                 | 9.8                                                                                 | 10.5                                                                                | 0.0                                                                                 | 14.7                                                                                |
| Cycle Q Clear(g_c), s        | 2.5                                                                               | 0.0                                                                               | 93.4                                                                              | 1.5                                                                               | 53.4                                                                              | 4.5                                                                               | 20.3                                                                                | 0.0                                                                                 | 9.8                                                                                 | 20.3                                                                                | 0.0                                                                                 | 14.7                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 0.07                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.93                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                |
| Lane Grp Cap(c), veh/h       | 283                                                                               | 0                                                                                 | 1232                                                                              | 140                                                                               | 1246                                                                              | 1056                                                                              | 99                                                                                  | 0                                                                                   | 232                                                                                 | 147                                                                                 | 0                                                                                   | 231                                                                                 |
| V/C Ratio(X)                 | 0.37                                                                              | 0.00                                                                              | 1.00                                                                              | 0.47                                                                              | 0.80                                                                              | 0.13                                                                              | 0.79                                                                                | 0.00                                                                                | 0.52                                                                                | 1.02                                                                                | 0.00                                                                                | 0.76                                                                                |
| Avail Cap(c_a), veh/h        | 283                                                                               | 0                                                                                 | 1232                                                                              | 140                                                                               | 1246                                                                              | 1056                                                                              | 99                                                                                  | 0                                                                                   | 232                                                                                 | 147                                                                                 | 0                                                                                   | 231                                                                                 |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh     | 18.9                                                                              | 0.0                                                                               | 23.3                                                                              | 36.9                                                                              | 16.7                                                                              | 8.5                                                                               | 68.3                                                                                | 0.0                                                                                 | 55.4                                                                                | 66.6                                                                                | 0.0                                                                                 | 57.5                                                                                |
| Incr Delay (d2), s/veh       | 3.7                                                                               | 0.0                                                                               | 26.7                                                                              | 10.9                                                                              | 5.5                                                                               | 0.3                                                                               | 46.5                                                                                | 0.0                                                                                 | 8.1                                                                                 | 80.0                                                                                | 0.0                                                                                 | 20.3                                                                                |
| Initial Q Delay(d3),s/veh    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 1.9                                                                               | 0.0                                                                               | 46.3                                                                              | 1.9                                                                               | 23.5                                                                              | 1.6                                                                               | 4.1                                                                                 | 0.0                                                                                 | 4.5                                                                                 | 8.6                                                                                 | 0.0                                                                                 | 7.3                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh         | 22.5                                                                              | 0.0                                                                               | 50.0                                                                              | 47.8                                                                              | 22.2                                                                              | 8.8                                                                               | 114.8                                                                               | 0.0                                                                                 | 63.5                                                                                | 146.6                                                                               | 0.0                                                                                 | 77.8                                                                                |
| LnGrp LOS                    | C                                                                                 | A                                                                                 | F                                                                                 | D                                                                                 | C                                                                                 | A                                                                                 | F                                                                                   | A                                                                                   | E                                                                                   | F                                                                                   | A                                                                                   | E                                                                                   |
| Approach Vol, veh/h          | 1341                                                                              |                                                                                   |                                                                                   | 1204                                                                              |                                                                                   |                                                                                   | 200                                                                                 |                                                                                     |                                                                                     | 325                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 47.9                                                                              |                                                                                   |                                                                                   | 22.0                                                                              |                                                                                   |                                                                                   | 83.8                                                                                |                                                                                     |                                                                                     | 109.6                                                                               |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | F                                                                                   |                                                                                     |                                                                                     | F                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 2                                                                                 |                                                                                   | 3                                                                                 | 4                                                                                 |                                                                                   | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 26.4                                                                              |                                                                                   | 13.7                                                                              | 99.9                                                                              |                                                                                   | 26.4                                                                              | 13.6                                                                                | 100.0                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | 6.1                                                                               |                                                                                   | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.1                                                                               | 6.6                                                                                 | 6.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | 20.3                                                                              |                                                                                   | 7.1                                                                               | 93.3                                                                              |                                                                                   | 20.3                                                                              | 7.0                                                                                 | 93.4                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+l1), s | 22.3                                                                              |                                                                                   | 4.5                                                                               | 55.4                                                                              |                                                                                   | 22.3                                                                              | 3.5                                                                                 | 95.4                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               |                                                                                   | 0.1                                                                               | 11.4                                                                              |                                                                                   | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay           | 46.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                  | D                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Closed PM

09/25/2020



| Movement                     | EBL   | EBT  | WBT  | WBR  | SBL   | SBR   |
|------------------------------|-------|------|------|------|-------|-------|
| Lane Configurations          |       |      |      |      |       |       |
| Traffic Volume (veh/h)       | 204   | 1109 | 926  | 309  | 463   | 234   |
| Future Volume (veh/h)        | 204   | 1109 | 926  | 309  | 463   | 234   |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00  |      |      | 1.00 | 1.00  | 1.00  |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach        |       | No   | No   |      | No    |       |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870 | 1870 | 1870 | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 222   | 1205 | 1007 | 0    | 503   | 0     |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92  |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2     | 2     |
| Cap, veh/h                   | 198   | 1268 | 1027 |      | 410   |       |
| Arrive On Green              | 0.08  | 0.68 | 0.55 | 0.00 | 0.23  | 0.00  |
| Sat Flow, veh/h              | 1781  | 1870 | 1870 | 0    | 1781  | 1585  |
| Grp Volume(v), veh/h         | 222   | 1205 | 1007 | 0    | 503   | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870 | 1870 | 0    | 1781  | 1585  |
| Q Serve(g_s), s              | 11.1  | 81.3 | 73.4 | 0.0  | 32.1  | 0.0   |
| Cycle Q Clear(g_c), s        | 11.1  | 81.3 | 73.4 | 0.0  | 32.1  | 0.0   |
| Prop In Lane                 | 1.00  |      |      | 0.00 | 1.00  | 1.00  |
| Lane Grp Cap(c), veh/h       | 198   | 1268 | 1027 |      | 410   |       |
| V/C Ratio(X)                 | 1.12  | 0.95 | 0.98 |      | 1.23  |       |
| Avail Cap(c_a), veh/h        | 198   | 1290 | 1034 |      | 410   |       |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.00 | 1.00  | 0.00  |
| Uniform Delay (d), s/veh     | 62.6  | 20.3 | 30.7 | 0.0  | 53.7  | 0.0   |
| Incr Delay (d2), s/veh       | 99.9  | 14.7 | 23.2 | 0.0  | 121.9 | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 12.5  | 37.6 | 38.4 | 0.0  | 28.2  | 0.0   |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |       |
| LnGrp Delay(d),s/veh         | 162.4 | 35.0 | 54.0 | 0.0  | 175.6 | 0.0   |
| LnGrp LOS                    | F     | C    | D    |      | F     |       |
| Approach Vol, veh/h          |       | 1427 | 1007 | A    | 503   | A     |
| Approach Delay, s/veh        |       | 54.8 | 54.0 |      | 175.6 |       |
| Approach LOS                 |       | D    | D    |      | F     |       |
| Timer - Assigned Phs         |       |      | 3    | 4    | 6     | 8     |
| Phs Duration (G+Y+Rc), s     |       |      | 18.0 | 83.5 | 38.0  | 101.5 |
| Change Period (Y+Rc), s      |       |      | 6.9  | 6.9  | 5.9   | * 6.9 |
| Max Green Setting (Gmax), s  |       |      | 11.1 | 77.1 | 32.1  | * 96  |
| Max Q Clear Time (g_c+I1), s |       |      | 13.1 | 75.4 | 34.1  | 83.3  |
| Green Ext Time (p_c), s      |       |      | 0.0  | 1.2  | 0.0   | 8.3   |
| <b>Intersection Summary</b>  |       |      |      |      |       |       |
| HCM 6th Ctrl Delay           |       |      | 75.2 |      |       |       |
| HCM 6th LOS                  |       |      | E    |      |       |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

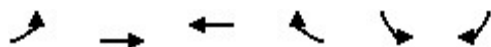
Unsignalized Delay for [EBT, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Closed PM

09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 580  | 986  | 844   | 210   | 70   | 429   |
| Future Volume (veh/h)        | 580  | 986  | 844   | 210   | 70   | 429   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 630  | 1072 | 917   | 0     | 76   | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 684  | 2787 | 1120  |       | 236  |       |
| Arrive On Green              | 0.38 | 0.78 | 0.32  | 0.00  | 0.07 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 630  | 1072 | 917   | 0     | 76   | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 28.8 | 8.0  | 20.4  | 0.0   | 1.8  | 0.0   |
| Cycle Q Clear(g_c), s        | 28.8 | 8.0  | 20.4  | 0.0   | 1.8  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 684  | 2787 | 1120  |       | 236  |       |
| V/C Ratio(X)                 | 0.92 | 0.38 | 0.82  |       | 0.32 |       |
| Avail Cap(c_a), veh/h        | 952  | 3560 | 1358  |       | 877  |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 25.1 | 2.8  | 27.0  | 0.0   | 38.0 | 0.0   |
| Incr Delay (d2), s/veh       | 11.1 | 0.1  | 3.4   | 0.0   | 0.8  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 13.6 | 1.7  | 8.8   | 0.0   | 0.8  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 36.2 | 2.9  | 30.5  | 0.0   | 38.7 | 0.0   |
| LnGrp LOS                    | D    | A    | C     |       | D    |       |
| Approach Vol, veh/h          |      | 1702 | 917   | A     | 76   | A     |
| Approach Delay, s/veh        |      | 15.2 | 30.5  |       | 38.7 |       |
| Approach LOS                 |      | B    | C     |       | D    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 40.1  | 34.3  | 11.1 | 74.4  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 46  | * 33  | 21.7 | * 86  |
| Max Q Clear Time (g_c+I1), s |      |      | 30.8  | 22.4  | 3.8  | 10.0  |
| Green Ext Time (p_c), s      |      |      | 2.0   | 4.6   | 0.2  | 10.7  |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 21.1  |       |      |       |
| HCM 6th LOS                  |      |      | C     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Closed PM

09/25/2020

|                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (veh/h)                                                                             | 240                                                                               | 0                                                                                 | 157                                                                               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 28                                                                                  | 511                                                                                 | 3                                                                                   | 0                                                                                   | 580                                                                                 | 47                                                                                  |
| Future Volume (veh/h)                                                                              | 240                                                                               | 0                                                                                 | 157                                                                               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 28                                                                                  | 511                                                                                 | 3                                                                                   | 0                                                                                   | 580                                                                                 | 47                                                                                  |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 261                                                                               | 0                                                                                 | 171                                                                               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 30                                                                                  | 555                                                                                 | 3                                                                                   | 0                                                                                   | 630                                                                                 | 51                                                                                  |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 402                                                                               | 0                                                                                 | 436                                                                               | 0                                                                                 | 0                                                                                 | 139                                                                               | 311                                                                                 | 732                                                                                 | 4                                                                                   | 361                                                                                 | 736                                                                                 | 624                                                                                 |
| Arrive On Green                                                                                    | 0.11                                                                              | 0.00                                                                              | 0.28                                                                              | 0.00                                                                              | 0.00                                                                              | 0.09                                                                              | 0.09                                                                                | 0.39                                                                                | 0.39                                                                                | 0.00                                                                                | 0.39                                                                                | 0.39                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 0                                                                                 | 1585                                                                              | 0                                                                                 | 0                                                                                 | 1585                                                                              | 1781                                                                                | 1859                                                                                | 10                                                                                  | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 261                                                                               | 0                                                                                 | 171                                                                               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 30                                                                                  | 0                                                                                   | 558                                                                                 | 0                                                                                   | 630                                                                                 | 51                                                                                  |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 0                                                                                 | 1585                                                                              | 0                                                                                 | 0                                                                                 | 1585                                                                              | 1781                                                                                | 0                                                                                   | 1869                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 8.5                                                                               | 0.0                                                                               | 7.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.7                                                                                 | 0.0                                                                                 | 20.7                                                                                | 0.0                                                                                 | 24.6                                                                                | 1.6                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 8.5                                                                               | 0.0                                                                               | 7.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.7                                                                                 | 0.0                                                                                 | 20.7                                                                                | 0.0                                                                                 | 24.6                                                                                | 1.6                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 1.00                                                                              | 0.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.01                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 402                                                                               | 0                                                                                 | 436                                                                               | 0                                                                                 | 0                                                                                 | 139                                                                               | 311                                                                                 | 0                                                                                   | 736                                                                                 | 361                                                                                 | 736                                                                                 | 624                                                                                 |
| V/C Ratio(X)                                                                                       | 0.65                                                                              | 0.00                                                                              | 0.39                                                                              | 0.00                                                                              | 0.00                                                                              | 0.01                                                                              | 0.10                                                                                | 0.00                                                                                | 0.76                                                                                | 0.00                                                                                | 0.86                                                                                | 0.08                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 402                                                                               | 0                                                                                 | 436                                                                               | 0                                                                                 | 0                                                                                 | 139                                                                               | 311                                                                                 | 0                                                                                   | 736                                                                                 | 361                                                                                 | 736                                                                                 | 624                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 29.1                                                                              | 0.0                                                                               | 23.6                                                                              | 0.0                                                                               | 0.0                                                                               | 33.3                                                                              | 14.9                                                                                | 0.0                                                                                 | 21.0                                                                                | 0.0                                                                                 | 22.2                                                                                | 15.2                                                                                |
| Incr Delay (d2), s/veh                                                                             | 3.6                                                                               | 0.0                                                                               | 2.6                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.6                                                                                 | 0.0                                                                                 | 7.2                                                                                 | 0.0                                                                                 | 12.2                                                                                | 0.3                                                                                 |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 5.0                                                                               | 0.0                                                                               | 2.9                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.3                                                                                 | 0.0                                                                                 | 9.9                                                                                 | 0.0                                                                                 | 12.5                                                                                | 0.6                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 32.7                                                                              | 0.0                                                                               | 26.2                                                                              | 0.0                                                                               | 0.0                                                                               | 33.4                                                                              | 15.5                                                                                | 0.0                                                                                 | 28.2                                                                                | 0.0                                                                                 | 34.4                                                                                | 15.4                                                                                |
| LnGrp LOS                                                                                          | C                                                                                 | A                                                                                 | C                                                                                 | A                                                                                 | A                                                                                 | C                                                                                 | B                                                                                   | A                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   | B                                                                                   |
| Approach Vol, veh/h                                                                                | 432                                                                               |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   |                                                                                   | 588                                                                                 |                                                                                     |                                                                                     | 681                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                                                              | 30.1                                                                              |                                                                                   | 33.4                                                                              |                                                                                   |                                                                                   |                                                                                   | 27.5                                                                                |                                                                                     |                                                                                     | 32.9                                                                                |                                                                                     |                                                                                     |
| Approach LOS                                                                                       | C                                                                                 |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs                                                                               | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 13.5                                                                              | 38.0                                                                              | 15.0                                                                              | 13.5                                                                              | 13.5                                                                              | 38.0                                                                              | 28.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 7                                                                               | * 32                                                                              | 8.5                                                                               | 7.0                                                                               | * 7                                                                               | * 32                                                                              | 22.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+l1), s                                                                       | 0.0                                                                               | 22.7                                                                              | 10.5                                                                              | 2.0                                                                               | 2.7                                                                               | 26.6                                                                              | 9.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               | 2.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 1.9                                                                               | 0.8                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 30.4                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection               |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh           | 55.5                                                                              |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Movement                   | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                        | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                            |  |  |
| Traffic Vol, veh/h         | 203                                                                               | 46                                                                                | 426                                                                               | 86                         | 120                                                                               | 602                                                                               |
| Future Vol, veh/h          | 203                                                                               | 46                                                                                | 426                                                                               | 86                         | 120                                                                               | 602                                                                               |
| Conflicting Peds, #/hr     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                          | 0                                                                                 | 0                                                                                 |
| Sign Control               | Stop                                                                              | Stop                                                                              | Free                                                                              | Free                       | Free                                                                              | Free                                                                              |
| RT Channelized             | -                                                                                 | None                                                                              | -                                                                                 | None                       | -                                                                                 | None                                                                              |
| Storage Length             | 0                                                                                 | 175                                                                               | -                                                                                 | -                          | 250                                                                               | -                                                                                 |
| Veh in Median Storage, #   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Grade, %                   | 0                                                                                 | -                                                                                 | 0                                                                                 | -                          | -                                                                                 | 0                                                                                 |
| Peak Hour Factor           | 92                                                                                | 92                                                                                | 92                                                                                | 92                         | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %          | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                          | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                  | 221                                                                               | 50                                                                                | 463                                                                               | 93                         | 130                                                                               | 654                                                                               |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Major/Minor                | Minor1                                                                            | Major1                                                                            |                                                                                   | Major2                     |                                                                                   |                                                                                   |
| Conflicting Flow All       | 1424                                                                              | 510                                                                               | 0                                                                                 | 0                          | 556                                                                               | 0                                                                                 |
| Stage 1                    | 510                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 914                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy              | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -                          | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2        | 5.42                                                                              | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Follow-up Hdwy             | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -                          | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver         | ~ 150                                                                             | 563                                                                               | -                                                                                 | -                          | 1015                                                                              | -                                                                                 |
| Stage 1                    | 603                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 391                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Platoon blocked, %         |                                                                                   |                                                                                   | -                                                                                 | -                          |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver         | ~ 131                                                                             | 563                                                                               | -                                                                                 | -                          | 1015                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver         | ~ 131                                                                             | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 1                    | 603                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
| Stage 2                    | 341                                                                               | -                                                                                 | -                                                                                 | -                          | -                                                                                 | -                                                                                 |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Approach                   | WB                                                                                | NB                                                                                |                                                                                   | SB                         |                                                                                   |                                                                                   |
| HCM Control Delay, s\$     | 326.3                                                                             | 0                                                                                 |                                                                                   | 1.5                        |                                                                                   |                                                                                   |
| HCM LOS                    | F                                                                                 |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
|                            |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt      | NBT                                                                               | NBR                                                                               | WBLn1                                                                             | WBLn2                      | SBL                                                                               | SBT                                                                               |
| Capacity (veh/h)           | -                                                                                 | -                                                                                 | 131                                                                               | 563                        | 1015                                                                              | -                                                                                 |
| HCM Lane V/C Ratio         | -                                                                                 | -                                                                                 | 1.684                                                                             | 0.089                      | 0.129                                                                             | -                                                                                 |
| HCM Control Delay (s)      | -                                                                                 | -\$                                                                               | 397.5                                                                             | 12                         | 9.1                                                                               | -                                                                                 |
| HCM Lane LOS               | -                                                                                 | -                                                                                 | F                                                                                 | B                          | A                                                                                 | -                                                                                 |
| HCM 95th %tile Q(veh)      | -                                                                                 | -                                                                                 | 16.3                                                                              | 0.3                        | 0.4                                                                               | -                                                                                 |
| Notes                      |                                                                                   |                                                                                   |                                                                                   |                            |                                                                                   |                                                                                   |
| ~: Volume exceeds capacity |                                                                                   | \$: Delay exceeds 300s                                                            |                                                                                   | +: Computation Not Defined |                                                                                   | *: All major volume in platoon                                                    |

| Intersection               |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh           | 0                                                                                 |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Movement                   | EBL                                                                               | EBR                                                                               | NBL   | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations        |  |  |       |  |  |  |
| Traffic Vol, veh/h         | 0                                                                                 | 0                                                                                 | 0     | 798                                                                               | 505                                                                               | 0                                                                                 |
| Future Vol, veh/h          | 0                                                                                 | 0                                                                                 | 0     | 798                                                                               | 505                                                                               | 0                                                                                 |
| Conflicting Peds, #/hr     | 0                                                                                 | 0                                                                                 | 0     | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control               | Yield                                                                             | Yield                                                                             | Free  | Free                                                                              | Stop                                                                              | Stop                                                                              |
| RT Channelized             | -                                                                                 | None                                                                              | -     | None                                                                              | -                                                                                 | Yield                                                                             |
| Storage Length             | 75                                                                                | 0                                                                                 | -     | -                                                                                 | -                                                                                 | 150                                                                               |
| Veh in Median Storage, #   | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                   | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor           | 92                                                                                | 92                                                                                | 92    | 92                                                                                | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %          | 2                                                                                 | 2                                                                                 | 2     | 2                                                                                 | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                  | 0                                                                                 | 0                                                                                 | 0     | 867                                                                               | 549                                                                               | 0                                                                                 |
|                            |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Major/Minor                |                                                                                   | Major1                                                                            |       | Minor2                                                                            |                                                                                   |                                                                                   |
| Conflicting Flow All       |                                                                                   | 0                                                                                 |       | 0                                                                                 | 867                                                                               | 0                                                                                 |
| Stage 1                    |                                                                                   | -                                                                                 |       | -                                                                                 | 0                                                                                 | -                                                                                 |
| Stage 2                    |                                                                                   | -                                                                                 |       | -                                                                                 | 867                                                                               | -                                                                                 |
| Critical Hdwy              |                                                                                   | 4.12                                                                              |       | -                                                                                 | 6.52                                                                              | 6.22                                                                              |
| Critical Hdwy Stg 1        |                                                                                   | -                                                                                 |       | -                                                                                 | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2        |                                                                                   | -                                                                                 |       | -                                                                                 | 5.52                                                                              | -                                                                                 |
| Follow-up Hdwy             |                                                                                   | 2.218                                                                             |       | -                                                                                 | 4.018                                                                             | 3.318                                                                             |
| Pot Cap-1 Maneuver         |                                                                                   | -                                                                                 |       | -                                                                                 | ~ 291                                                                             | -                                                                                 |
| Stage 1                    |                                                                                   | -                                                                                 |       | -                                                                                 | -                                                                                 | -                                                                                 |
| Stage 2                    |                                                                                   | -                                                                                 |       | -                                                                                 | ~ 370                                                                             | -                                                                                 |
| Platoon blocked, %         |                                                                                   |                                                                                   |       | -                                                                                 |                                                                                   |                                                                                   |
| Mov Cap-1 Maneuver         |                                                                                   | -                                                                                 |       | -                                                                                 | 0                                                                                 | -                                                                                 |
| Mov Cap-2 Maneuver         |                                                                                   | -                                                                                 |       | -                                                                                 | 0                                                                                 | -                                                                                 |
| Stage 1                    |                                                                                   | -                                                                                 |       | -                                                                                 | 0                                                                                 | -                                                                                 |
| Stage 2                    |                                                                                   | -                                                                                 |       | -                                                                                 | 0                                                                                 | -                                                                                 |
|                            |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Approach                   |                                                                                   | NB                                                                                |       | SB                                                                                |                                                                                   |                                                                                   |
| HCM Control Delay, s       |                                                                                   | 0                                                                                 |       |                                                                                   |                                                                                   |                                                                                   |
| HCM LOS                    |                                                                                   |                                                                                   |       | -                                                                                 |                                                                                   |                                                                                   |
|                            |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt      | NBL                                                                               | NBT                                                                               | SBLn1 | SBLn2                                                                             |                                                                                   |                                                                                   |
| Capacity (veh/h)           | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio         | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Control Delay (s)      | 0                                                                                 | -                                                                                 | -     | 0                                                                                 |                                                                                   |                                                                                   |
| HCM Lane LOS               | A                                                                                 | -                                                                                 | -     | A                                                                                 |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)      | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| Notes                      |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| ~: Volume exceeds capacity |                                                                                   | \$: Delay exceeds 300s                                                            |       | +: Computation Not Defined                                                        |                                                                                   | *: All major volume in platoon                                                    |



| Intersection             |                                                                                   |          |                                                                                   |       |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.7                                                                               |          |                                                                                   |       |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |       |       |  |
| Traffic Vol, veh/h       | 44                                                                                | 0        | 86                                                                                | 74    | 6     | 74                                                                                |
| Future Vol, veh/h        | 44                                                                                | 0        | 86                                                                                | 74    | 6     | 74                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0     | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free  | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None  | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -     | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92    | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2     | 2     | 2                                                                                 |
| Mvmt Flow                | 48                                                                                | 0        | 93                                                                                | 80    | 7     | 80                                                                                |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |       |       |                                                                                   |
| Conflicting Flow All     | 227                                                                               | 133      | 0                                                                                 | 0     | 173   | 0                                                                                 |
| Stage 1                  | 133                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 94                                                                                | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -     | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -     | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 761                                                                               | 916      | -                                                                                 | -     | 1404  | -                                                                                 |
| Stage 1                  | 893                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 930                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -     |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 757                                                                               | 916      | -                                                                                 | -     | 1404  | -                                                                                 |
| Mov Cap-2 Maneuver       | 757                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 1                  | 893                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 925                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |       |       |                                                                                   |
| HCM Control Delay, s     | 10.1                                                                              | 0        | 0.6                                                                               |       |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 757                                                                               | 1404  | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.063                                                                             | 0.005 | -     |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | -        | 10.1                                                                              | 7.6   | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | B                                                                                 | A     | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.2                                                                               | 0     | -     |                                                                                   |

# HCM 6th Signalized Intersection Summary

## 1: 18th & Rte 14

2020 Bridge Closed WE

09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                                                |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                                                             | 149                                                                               | 494                                                                               | 3                                                                                 | 1                                                                                 | 887                                                                               | 49                                                                                | 1                                                                                   | 0                                                                                   | 1                                                                                   | 58                                                                                  | 0                                                                                   | 124                                                                                 |
| Future Volume (veh/h)                                                                              | 149                                                                               | 494                                                                               | 3                                                                                 | 1                                                                                 | 887                                                                               | 49                                                                                | 1                                                                                   | 0                                                                                   | 1                                                                                   | 58                                                                                  | 0                                                                                   | 124                                                                                 |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                                                               | 162                                                                               | 537                                                                               | 3                                                                                 | 1                                                                                 | 964                                                                               | 53                                                                                | 1                                                                                   | 0                                                                                   | 1                                                                                   | 63                                                                                  | 0                                                                                   | 135                                                                                 |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                                                         | 204                                                                               | 1394                                                                              | 8                                                                                 | 3                                                                                 | 1346                                                                              | 74                                                                                | 76                                                                                  | 0                                                                                   | 556                                                                                 | 403                                                                                 | 0                                                                                   | 344                                                                                 |
| Arrive On Green                                                                                    | 0.11                                                                              | 0.38                                                                              | 0.38                                                                              | 0.00                                                                              | 0.27                                                                              | 0.27                                                                              | 0.04                                                                                | 0.00                                                                                | 0.35                                                                                | 0.22                                                                                | 0.00                                                                                | 0.22                                                                                |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 3623                                                                              | 20                                                                                | 1781                                                                              | 4954                                                                              | 272                                                                               | 1781                                                                                | 0                                                                                   | 1585                                                                                | 1416                                                                                | 0                                                                                   | 1585                                                                                |
| Grp Volume(v), veh/h                                                                               | 162                                                                               | 263                                                                               | 277                                                                               | 1                                                                                 | 662                                                                               | 355                                                                               | 1                                                                                   | 0                                                                                   | 1                                                                                   | 63                                                                                  | 0                                                                                   | 135                                                                                 |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 1777                                                                              | 1867                                                                              | 1781                                                                              | 1702                                                                              | 1821                                                                              | 1781                                                                                | 0                                                                                   | 1585                                                                                | 1416                                                                                | 0                                                                                   | 1585                                                                                |
| Q Serve(g_s), s                                                                                    | 6.6                                                                               | 8.0                                                                               | 8.0                                                                               | 0.0                                                                               | 13.1                                                                              | 13.2                                                                              | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 2.7                                                                                 | 0.0                                                                                 | 5.4                                                                                 |
| Cycle Q Clear(g_c), s                                                                              | 6.6                                                                               | 8.0                                                                               | 8.0                                                                               | 0.0                                                                               | 13.1                                                                              | 13.2                                                                              | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 2.8                                                                                 | 0.0                                                                                 | 5.4                                                                                 |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 0.01                                                                              | 1.00                                                                              |                                                                                   | 0.15                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Lane Grp Cap(c), veh/h                                                                             | 204                                                                               | 683                                                                               | 718                                                                               | 3                                                                                 | 925                                                                               | 495                                                                               | 76                                                                                  | 0                                                                                   | 556                                                                                 | 403                                                                                 | 0                                                                                   | 344                                                                                 |
| V/C Ratio(X)                                                                                       | 0.79                                                                              | 0.39                                                                              | 0.39                                                                              | 0.29                                                                              | 0.72                                                                              | 0.72                                                                              | 0.01                                                                                | 0.00                                                                                | 0.00                                                                                | 0.16                                                                                | 0.00                                                                                | 0.39                                                                                |
| Avail Cap(c_a), veh/h                                                                              | 420                                                                               | 871                                                                               | 915                                                                               | 181                                                                               | 1213                                                                              | 649                                                                               | 76                                                                                  | 0                                                                                   | 556                                                                                 | 403                                                                                 | 0                                                                                   | 344                                                                                 |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                                                           | 32.2                                                                              | 16.6                                                                              | 16.6                                                                              | 37.2                                                                              | 24.6                                                                              | 24.6                                                                              | 34.2                                                                                | 0.0                                                                                 | 15.7                                                                                | 24.0                                                                                | 0.0                                                                                 | 25.0                                                                                |
| Incr Delay (d2), s/veh                                                                             | 6.8                                                                               | 0.4                                                                               | 0.3                                                                               | 41.4                                                                              | 1.4                                                                               | 2.6                                                                               | 0.1                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.8                                                                                 | 0.0                                                                                 | 3.3                                                                                 |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                                                           | 3.1                                                                               | 3.1                                                                               | 3.3                                                                               | 0.1                                                                               | 5.2                                                                               | 5.7                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 1.0                                                                                 | 0.0                                                                                 | 2.3                                                                                 |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                                                               | 38.9                                                                              | 17.0                                                                              | 16.9                                                                              | 78.6                                                                              | 26.0                                                                              | 27.2                                                                              | 34.3                                                                                | 0.0                                                                                 | 15.8                                                                                | 24.8                                                                                | 0.0                                                                                 | 28.4                                                                                |
| LnGrp LOS                                                                                          | D                                                                                 | B                                                                                 | B                                                                                 | E                                                                                 | C                                                                                 | C                                                                                 | C                                                                                   | A                                                                                   | B                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   |
| Approach Vol, veh/h                                                                                | 702                                                                               |                                                                                   | 1018                                                                              |                                                                                   | 2                                                                                 |                                                                                   | 198                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Approach Delay, s/veh                                                                              | 22.0                                                                              |                                                                                   | 26.5                                                                              |                                                                                   | 25.0                                                                              |                                                                                   | 27.2                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Approach LOS                                                                                       | C                                                                                 |                                                                                   | C                                                                                 |                                                                                   | C                                                                                 |                                                                                   | C                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Timer - Assigned Phs                                                                               | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                                                           | 33.0                                                                              | 15.0                                                                              | 26.7                                                                              | 10.0                                                                              | 23.0                                                                              | 6.5                                                                               | 35.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                                                            | * 6.8                                                                             | * 6.4                                                                             | * 6.4                                                                             | * 6.8                                                                             | * 6.8                                                                             | * 6.4                                                                             | * 6.4                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                                                        | * 26                                                                              | * 18                                                                              | * 27                                                                              | * 3.2                                                                             | * 16                                                                              | * 7.6                                                                             | * 37                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                                                       | 2.0                                                                               | 8.6                                                                               | 15.2                                                                              | 2.0                                                                               | 7.4                                                                               | 2.0                                                                               | 10.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               | 0.3                                                                               | 5.1                                                                               | 0.0                                                                               | 0.6                                                                               | 0.0                                                                               | 3.4                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                                                 | 24.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                                                        | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 2: 12th & Rte 14

2020 Bridge Closed WE

09/25/2020

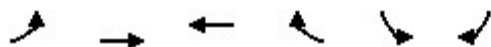
|                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                |  |  |                                                                                   |  |  |  |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (veh/h)                                             | 38                                                                                | 610                                                                               | 59                                                                                | 40                                                                                | 730                                                                               | 22                                                                                | 30                                                                                  | 4                                                                                   | 55                                                                                  | 22                                                                                  | 1                                                                                   | 33                                                                                  |
| Future Volume (veh/h)                                              | 38                                                                                | 610                                                                               | 59                                                                                | 40                                                                                | 730                                                                               | 22                                                                                | 30                                                                                  | 4                                                                                   | 55                                                                                  | 22                                                                                  | 1                                                                                   | 33                                                                                  |
| Initial Q (Qb), veh                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ped-Bike Adj(A_pbT)                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |
| Parking Bus, Adj                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Work Zone On Approach                                              |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                     | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |
| Adj Sat Flow, veh/h/ln                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |
| Adj Flow Rate, veh/h                                               | 41                                                                                | 663                                                                               | 64                                                                                | 43                                                                                | 793                                                                               | 24                                                                                | 33                                                                                  | 4                                                                                   | 60                                                                                  | 24                                                                                  | 1                                                                                   | 36                                                                                  |
| Peak Hour Factor                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Percent Heavy Veh, %                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |
| Cap, veh/h                                                         | 392                                                                               | 873                                                                               | 84                                                                                | 431                                                                               | 973                                                                               | 824                                                                               | 217                                                                                 | 10                                                                                  | 156                                                                                 | 192                                                                                 | 4                                                                                   | 161                                                                                 |
| Arrive On Green                                                    | 0.10                                                                              | 0.52                                                                              | 0.52                                                                              | 0.10                                                                              | 0.52                                                                              | 0.52                                                                              | 0.10                                                                                | 0.10                                                                                | 0.10                                                                                | 0.10                                                                                | 0.10                                                                                | 0.10                                                                                |
| Sat Flow, veh/h                                                    | 1781                                                                              | 1679                                                                              | 162                                                                               | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1371                                                                                | 100                                                                                 | 1500                                                                                | 1338                                                                                | 43                                                                                  | 1549                                                                                |
| Grp Volume(v), veh/h                                               | 41                                                                                | 0                                                                                 | 727                                                                               | 43                                                                                | 793                                                                               | 24                                                                                | 33                                                                                  | 0                                                                                   | 64                                                                                  | 24                                                                                  | 0                                                                                   | 37                                                                                  |
| Grp Sat Flow(s),veh/h/ln                                           | 1781                                                                              | 0                                                                                 | 1841                                                                              | 1781                                                                              | 1870                                                                              | 1585                                                                              | 1371                                                                                | 0                                                                                   | 1600                                                                                | 1338                                                                                | 0                                                                                   | 1592                                                                                |
| Q Serve(g_s), s                                                    | 0.6                                                                               | 0.0                                                                               | 21.9                                                                              | 0.7                                                                               | 24.7                                                                              | 0.5                                                                               | 1.6                                                                                 | 0.0                                                                                 | 2.6                                                                                 | 1.2                                                                                 | 0.0                                                                                 | 1.5                                                                                 |
| Cycle Q Clear(g_c), s                                              | 0.6                                                                               | 0.0                                                                               | 21.9                                                                              | 0.7                                                                               | 24.7                                                                              | 0.5                                                                               | 3.1                                                                                 | 0.0                                                                                 | 2.6                                                                                 | 3.8                                                                                 | 0.0                                                                                 | 1.5                                                                                 |
| Prop In Lane                                                       | 1.00                                                                              |                                                                                   | 0.09                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 0.94                                                                                | 1.00                                                                                |                                                                                     | 0.97                                                                                |
| Lane Grp Cap(c), veh/h                                             | 392                                                                               | 0                                                                                 | 957                                                                               | 431                                                                               | 973                                                                               | 824                                                                               | 217                                                                                 | 0                                                                                   | 167                                                                                 | 192                                                                                 | 0                                                                                   | 166                                                                                 |
| V/C Ratio(X)                                                       | 0.10                                                                              | 0.00                                                                              | 0.76                                                                              | 0.10                                                                              | 0.82                                                                              | 0.03                                                                              | 0.15                                                                                | 0.00                                                                                | 0.38                                                                                | 0.12                                                                                | 0.00                                                                                | 0.22                                                                                |
| Avail Cap(c_a), veh/h                                              | 392                                                                               | 0                                                                                 | 957                                                                               | 431                                                                               | 973                                                                               | 824                                                                               | 217                                                                                 | 0                                                                                   | 167                                                                                 | 192                                                                                 | 0                                                                                   | 166                                                                                 |
| HCM Platoon Ratio                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Upstream Filter(I)                                                 | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                |
| Uniform Delay (d), s/veh                                           | 9.8                                                                               | 0.0                                                                               | 13.3                                                                              | 8.8                                                                               | 14.0                                                                              | 8.2                                                                               | 30.2                                                                                | 0.0                                                                                 | 29.3                                                                                | 31.0                                                                                | 0.0                                                                                 | 28.7                                                                                |
| Incr Delay (d2), s/veh                                             | 0.5                                                                               | 0.0                                                                               | 5.6                                                                               | 0.5                                                                               | 7.5                                                                               | 0.1                                                                               | 1.5                                                                                 | 0.0                                                                                 | 6.6                                                                                 | 1.3                                                                                 | 0.0                                                                                 | 3.1                                                                                 |
| Initial Q Delay(d3),s/veh                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln                                           | 0.2                                                                               | 0.0                                                                               | 9.2                                                                               | 0.2                                                                               | 10.9                                                                              | 0.2                                                                               | 0.6                                                                                 | 0.0                                                                                 | 1.3                                                                                 | 0.4                                                                                 | 0.0                                                                                 | 0.7                                                                                 |
| Unsig. Movement Delay, s/veh                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d),s/veh                                               | 10.4                                                                              | 0.0                                                                               | 19.0                                                                              | 9.3                                                                               | 21.5                                                                              | 8.3                                                                               | 31.6                                                                                | 0.0                                                                                 | 35.8                                                                                | 32.4                                                                                | 0.0                                                                                 | 31.8                                                                                |
| LnGrp LOS                                                          | B                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | C                                                                                 | A                                                                                 | C                                                                                   | A                                                                                   | D                                                                                   | C                                                                                   | A                                                                                   | C                                                                                   |
| Approach Vol, veh/h                                                |                                                                                   | 768                                                                               |                                                                                   |                                                                                   | 860                                                                               |                                                                                   |                                                                                     | 97                                                                                  |                                                                                     |                                                                                     | 61                                                                                  |                                                                                     |
| Approach Delay, s/veh                                              |                                                                                   | 18.5                                                                              |                                                                                   |                                                                                   | 20.5                                                                              |                                                                                   |                                                                                     | 34.4                                                                                |                                                                                     |                                                                                     | 32.0                                                                                |                                                                                     |
| Approach LOS                                                       |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| Timer - Assigned Phs                                               |                                                                                   | 2                                                                                 | 3                                                                                 | 4                                                                                 |                                                                                   | 6                                                                                 | 7                                                                                   | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s                                           |                                                                                   | 13.4                                                                              | 13.6                                                                              | 43.0                                                                              |                                                                                   | 13.4                                                                              | 13.6                                                                                | 43.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s                                            |                                                                                   | 6.1                                                                               | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.1                                                                               | 6.6                                                                                 | 6.6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s                                        |                                                                                   | 7.3                                                                               | 7.0                                                                               | 36.4                                                                              |                                                                                   | 7.3                                                                               | 7.0                                                                                 | 36.4                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s                                       |                                                                                   | 5.1                                                                               | 2.6                                                                               | 26.7                                                                              |                                                                                   | 5.8                                                                               | 2.7                                                                                 | 23.9                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s                                            |                                                                                   | 0.1                                                                               | 0.0                                                                               | 4.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                                 | 4.2                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Intersection Summary</b>                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th Ctrl Delay                                                 |                                                                                   |                                                                                   | 20.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 6th LOS                                                        |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>Notes</b>                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| User approved pedestrian interval to be less than phase max green. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# HCM 6th Signalized Intersection Summary

## 3: Rte 14 & 9th

2020 Bridge Closed WE

09/25/2020



| Movement                     | EBL  | EBT  | WBT  | WBR  | SBL  | SBR   |
|------------------------------|------|------|------|------|------|-------|
| Lane Configurations          |      |      |      |      |      |       |
| Traffic Volume (veh/h)       | 90   | 488  | 758  | 315  | 274  | 117   |
| Future Volume (veh/h)        | 90   | 488  | 758  | 315  | 274  | 117   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |      | 1.00 | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No   |      | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 98   | 530  | 824  | 0    | 298  | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     |
| Cap, veh/h                   | 276  | 1232 | 944  |      | 343  |       |
| Arrive On Green              | 0.07 | 0.66 | 0.50 | 0.00 | 0.19 | 0.00  |
| Sat Flow, veh/h              | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Grp Volume(v), veh/h         | 98   | 530  | 824  | 0    | 298  | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1870 | 1870 | 0    | 1781 | 1585  |
| Q Serve(g_s), s              | 0.0  | 11.6 | 33.5 | 0.0  | 13.9 | 0.0   |
| Cycle Q Clear(g_c), s        | 0.0  | 11.6 | 33.5 | 0.0  | 13.9 | 0.0   |
| Prop In Lane                 | 1.00 |      |      | 0.00 | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 276  | 1232 | 944  |      | 343  |       |
| V/C Ratio(X)                 | 0.36 | 0.43 | 0.87 |      | 0.87 |       |
| Avail Cap(c_a), veh/h        | 296  | 2251 | 1918 |      | 516  |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 34.4 | 7.0  | 18.8 | 0.0  | 33.7 | 0.0   |
| Incr Delay (d2), s/veh       | 0.8  | 0.2  | 2.7  | 0.0  | 10.1 | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 1.9  | 4.0  | 13.9 | 0.0  | 6.8  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |
| LnGrp Delay(d),s/veh         | 35.2 | 7.2  | 21.5 | 0.0  | 43.7 | 0.0   |
| LnGrp LOS                    | D    | A    | C    |      | D    |       |
| Approach Vol, veh/h          |      | 628  | 824  | A    | 298  | A     |
| Approach Delay, s/veh        |      | 11.6 | 21.5 |      | 43.7 |       |
| Approach LOS                 |      | B    | C    |      | D    |       |
| Timer - Assigned Phs         |      |      | 3    | 4    | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 13.2 | 50.3 | 22.4 | 63.5  |
| Change Period (Y+Rc), s      |      |      | 6.9  | 6.9  | 5.9  | * 6.9 |
| Max Green Setting (Gmax), s  |      |      | 7.3  | 88.1 | 24.9 | * 1E2 |
| Max Q Clear Time (g_c+I1), s |      |      | 2.0  | 35.5 | 15.9 | 13.6  |
| Green Ext Time (p_c), s      |      |      | 0.1  | 7.9  | 0.6  | 4.0   |
| <b>Intersection Summary</b>  |      |      |      |      |      |       |
| HCM 6th Ctrl Delay           |      |      | 21.7 |      |      |       |
| HCM 6th LOS                  |      |      | C    |      |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

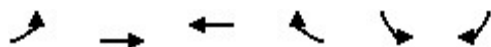
Unsignalized Delay for [EBT, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 4: Rte 14 & 3rd

2020 Bridge Closed WE

09/25/2020



| Movement                     | EBL  | EBT  | WBT   | WBR   | SBL  | SBR   |
|------------------------------|------|------|-------|-------|------|-------|
| Lane Configurations          |      |      |       |       |      |       |
| Traffic Volume (veh/h)       | 247  | 524  | 755   | 138   | 77   | 343   |
| Future Volume (veh/h)        | 247  | 524  | 755   | 138   | 77   | 343   |
| Initial Q (Qb), veh          | 0    | 0    | 0     | 0     | 0    | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Work Zone On Approach        |      | No   | No    |       | No   |       |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  |
| Adj Flow Rate, veh/h         | 268  | 570  | 821   | 0     | 84   | 0     |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  |
| Percent Heavy Veh, %         | 2    | 2    | 2     | 2     | 2    | 2     |
| Cap, veh/h                   | 344  | 2405 | 1243  |       | 319  |       |
| Arrive On Green              | 0.19 | 0.68 | 0.35  | 0.00  | 0.09 | 0.00  |
| Sat Flow, veh/h              | 1781 | 3647 | 3647  | 1585  | 3456 | 1585  |
| Grp Volume(v), veh/h         | 268  | 570  | 821   | 0     | 84   | 0     |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1777  | 1585  | 1728 | 1585  |
| Q Serve(g_s), s              | 7.8  | 3.4  | 10.7  | 0.0   | 1.2  | 0.0   |
| Cycle Q Clear(g_c), s        | 7.8  | 3.4  | 10.7  | 0.0   | 1.2  | 0.0   |
| Prop In Lane                 | 1.00 |      |       | 1.00  | 1.00 | 1.00  |
| Lane Grp Cap(c), veh/h       | 344  | 2405 | 1243  |       | 319  |       |
| V/C Ratio(X)                 | 0.78 | 0.24 | 0.66  |       | 0.26 |       |
| Avail Cap(c_a), veh/h        | 1002 | 5060 | 2585  |       | 1881 |       |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00  | 0.00  | 1.00 | 0.00  |
| Uniform Delay (d), s/veh     | 20.9 | 3.4  | 15.0  | 0.0   | 23.0 | 0.0   |
| Incr Delay (d2), s/veh       | 3.8  | 0.1  | 0.6   | 0.0   | 0.4  | 0.0   |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 3.3  | 0.7  | 3.8   | 0.0   | 0.5  | 0.0   |
| Unsig. Movement Delay, s/veh |      |      |       |       |      |       |
| LnGrp Delay(d),s/veh         | 24.7 | 3.4  | 15.6  | 0.0   | 23.5 | 0.0   |
| LnGrp LOS                    | C    | A    | B     |       | C    |       |
| Approach Vol, veh/h          |      | 838  | 821   | A     | 84   | A     |
| Approach Delay, s/veh        |      | 10.3 | 15.6  |       | 23.5 |       |
| Approach LOS                 |      | B    | B     |       | C    |       |
| Timer - Assigned Phs         |      |      | 3     | 4     | 6    | 8     |
| Phs Duration (G+Y+Rc), s     |      |      | 17.8  | 26.4  | 10.3 | 44.2  |
| Change Period (Y+Rc), s      |      |      | * 7.3 | * 7.3 | 5.3  | * 7.3 |
| Max Green Setting (Gmax), s  |      |      | * 31  | * 40  | 29.7 | * 78  |
| Max Q Clear Time (g_c+l1), s |      |      | 9.8   | 12.7  | 3.2  | 5.4   |
| Green Ext Time (p_c), s      |      |      | 0.8   | 6.4   | 0.2  | 4.5   |
| <b>Intersection Summary</b>  |      |      |       |       |      |       |
| HCM 6th Ctrl Delay           |      |      | 13.4  |       |      |       |
| HCM 6th LOS                  |      |      | B     |       |      |       |

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

# HCM 6th Signalized Intersection Summary

## 7: Rte NN & Bluff

2020 Bridge Closed WE

09/25/2020

|                                                                                                    |  |  |  |  |  |  |   |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| Movement                                                                                           | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |  |
| Lane Configurations                                                                                |  |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |  |
| Traffic Volume (veh/h)                                                                             | 16                                                                                | 0                                                                                 | 12                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                   | 401                                                                                 | 1                                                                                   | 0                                                                                   | 337                                                                                 | 19                                                                                  |  |
| Future Volume (veh/h)                                                                              | 16                                                                                | 0                                                                                 | 12                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                   | 401                                                                                 | 1                                                                                   | 0                                                                                   | 337                                                                                 | 19                                                                                  |  |
| Initial Q (Qb), veh                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |  |
| Ped-Bike Adj(A_pbT)                                                                                | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |  |
| Parking Bus, Adj                                                                                   | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Work Zone On Approach                                                                              | No                                                                                |                                                                                   |                                                                                   | No                                                                                |                                                                                   |                                                                                   | No                                                                                  |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |  |
| Adj Sat Flow, veh/h/ln                                                                             | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                | 1870                                                                                |  |
| Adj Flow Rate, veh/h                                                                               | 17                                                                                | 0                                                                                 | 13                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                   | 436                                                                                 | 1                                                                                   | 0                                                                                   | 366                                                                                 | 21                                                                                  |  |
| Peak Hour Factor                                                                                   | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |  |
| Percent Heavy Veh, %                                                                               | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   | 2                                                                                   |  |
| Cap, veh/h                                                                                         | 455                                                                               | 0                                                                                 | 500                                                                               | 0                                                                                 | 201                                                                               | 0                                                                                 | 403                                                                                 | 517                                                                                 | 1                                                                                   | 356                                                                                 | 518                                                                                 | 439                                                                                 |  |
| Arrive On Green                                                                                    | 0.11                                                                              | 0.00                                                                              | 0.32                                                                              | 0.00                                                                              | 0.00                                                                              | 0.00                                                                              | 0.11                                                                                | 0.28                                                                                | 0.28                                                                                | 0.00                                                                                | 0.28                                                                                | 0.28                                                                                |  |
| Sat Flow, veh/h                                                                                    | 1781                                                                              | 0                                                                                 | 1585                                                                              | 0                                                                                 | 1870                                                                              | 0                                                                                 | 1781                                                                                | 1865                                                                                | 4                                                                                   | 1781                                                                                | 1870                                                                                | 1585                                                                                |  |
| Grp Volume(v), veh/h                                                                               | 17                                                                                | 0                                                                                 | 13                                                                                | 0                                                                                 | 0                                                                                 | 0                                                                                 | 3                                                                                   | 0                                                                                   | 437                                                                                 | 0                                                                                   | 366                                                                                 | 21                                                                                  |  |
| Grp Sat Flow(s),veh/h/ln                                                                           | 1781                                                                              | 0                                                                                 | 1585                                                                              | 0                                                                                 | 1870                                                                              | 0                                                                                 | 1781                                                                                | 0                                                                                   | 1870                                                                                | 1781                                                                                | 1870                                                                                | 1585                                                                                |  |
| Q Serve(g_s), s                                                                                    | 0.5                                                                               | 0.0                                                                               | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.1                                                                                 | 0.0                                                                                 | 14.3                                                                                | 0.0                                                                                 | 11.4                                                                                | 0.6                                                                                 |  |
| Cycle Q Clear(g_c), s                                                                              | 0.5                                                                               | 0.0                                                                               | 0.4                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.1                                                                                 | 0.0                                                                                 | 14.3                                                                                | 0.0                                                                                 | 11.4                                                                                | 0.6                                                                                 |  |
| Prop In Lane                                                                                       | 1.00                                                                              |                                                                                   | 1.00                                                                              | 0.00                                                                              |                                                                                   | 0.00                                                                              | 1.00                                                                                |                                                                                     | 0.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                |  |
| Lane Grp Cap(c), veh/h                                                                             | 455                                                                               | 0                                                                                 | 500                                                                               | 0                                                                                 | 201                                                                               | 0                                                                                 | 403                                                                                 | 0                                                                                   | 518                                                                                 | 356                                                                                 | 518                                                                                 | 439                                                                                 |  |
| V/C Ratio(X)                                                                                       | 0.04                                                                              | 0.00                                                                              | 0.03                                                                              | 0.00                                                                              | 0.00                                                                              | 0.00                                                                              | 0.01                                                                                | 0.00                                                                                | 0.84                                                                                | 0.00                                                                                | 0.71                                                                                | 0.05                                                                                |  |
| Avail Cap(c_a), veh/h                                                                              | 455                                                                               | 0                                                                                 | 500                                                                               | 0                                                                                 | 201                                                                               | 0                                                                                 | 403                                                                                 | 0                                                                                   | 518                                                                                 | 356                                                                                 | 518                                                                                 | 439                                                                                 |  |
| HCM Platoon Ratio                                                                                  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Upstream Filter(I)                                                                                 | 1.00                                                                              | 0.00                                                                              | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 0.00                                                                                | 1.00                                                                                | 1.00                                                                                |  |
| Uniform Delay (d), s/veh                                                                           | 18.7                                                                              | 0.0                                                                               | 15.4                                                                              | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 13.3                                                                                | 0.0                                                                                 | 22.2                                                                                | 0.0                                                                                 | 21.1                                                                                | 17.2                                                                                |  |
| Incr Delay (d2), s/veh                                                                             | 0.0                                                                               | 0.0                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 15.4                                                                                | 0.0                                                                                 | 7.9                                                                                 | 0.2                                                                                 |  |
| Initial Q Delay(d3),s/veh                                                                          | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |  |
| %ile BackOfQ(50%),veh/ln                                                                           | 0.2                                                                               | 0.0                                                                               | 0.1                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 8.0                                                                                 | 0.0                                                                                 | 5.8                                                                                 | 0.2                                                                                 |  |
| Unsig. Movement Delay, s/veh                                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| LnGrp Delay(d),s/veh                                                                               | 18.7                                                                              | 0.0                                                                               | 15.5                                                                              | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 13.4                                                                                | 0.0                                                                                 | 37.6                                                                                | 0.0                                                                                 | 29.0                                                                                | 17.4                                                                                |  |
| LnGrp LOS                                                                                          | B                                                                                 | A                                                                                 | B                                                                                 | A                                                                                 | A                                                                                 | A                                                                                 | B                                                                                   | A                                                                                   | D                                                                                   | A                                                                                   | C                                                                                   | B                                                                                   |  |
| Approach Vol, veh/h                                                                                | 30                                                                                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                     | 440                                                                                 |                                                                                     |                                                                                     |                                                                                     | 387                                                                                 |  |
| Approach Delay, s/veh                                                                              | 17.3                                                                              |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                     | 37.4                                                                                |                                                                                     |                                                                                     |                                                                                     | 28.4                                                                                |  |
| Approach LOS                                                                                       | B                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | D                                                                                   |                                                                                     |                                                                                     |                                                                                     | C                                                                                   |  |
| Timer - Assigned Phs                                                                               | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Phs Duration (G+Y+Rc), s                                                                           | 13.5                                                                              | 24.5                                                                              | 13.5                                                                              | 13.5                                                                              | 13.5                                                                              | 24.5                                                                              | 27.0                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Change Period (Y+Rc), s                                                                            | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                               | 6.5                                                                               | * 6.5                                                                             | * 6.5                                                                             | 6.5                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Max Green Setting (Gmax), s                                                                        | * 7                                                                               | * 18                                                                              | 7.0                                                                               | 7.0                                                                               | * 7                                                                               | * 18                                                                              | 20.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Max Q Clear Time (g_c+I1), s                                                                       | 0.0                                                                               | 16.3                                                                              | 2.5                                                                               | 0.0                                                                               | 2.1                                                                               | 13.4                                                                              | 2.4                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Green Ext Time (p_c), s                                                                            | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.9                                                                               | 0.0                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Intersection Summary                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| HCM 6th Ctrl Delay                                                                                 |                                                                                   |                                                                                   |                                                                                   | 32.6                                                                              |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| HCM 6th LOS                                                                                        |                                                                                   |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| Notes                                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| User approved pedestrian interval to be less than phase max green.                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.6                                                                               |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Movement                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR  | SBL                                                                               | SBT                                                                               |
| Lane Configurations      |  |  |  |      |  |  |
| Traffic Vol, veh/h       | 43                                                                                | 30                                                                                | 382                                                                               | 18   | 27                                                                                | 317                                                                               |
| Future Vol, veh/h        | 43                                                                                | 30                                                                                | 382                                                                               | 18   | 27                                                                                | 317                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop                                                                              | Free                                                                              | Free | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -                                                                                 | None | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | 175                                                                               | -                                                                                 | -    | 250                                                                               | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 47                                                                                | 33                                                                                | 415                                                                               | 20   | 29                                                                                | 345                                                                               |
| Major/Minor              | Minor1                                                                            | Major1                                                                            | Major2                                                                            |      |                                                                                   |                                                                                   |
| Conflicting Flow All     | 828                                                                               | 425                                                                               | 0                                                                                 | 0    | 435                                                                               | 0                                                                                 |
| Stage 1                  | 425                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 403                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22                                                                              | -                                                                                 | -    | 4.12                                                                              | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318                                                                             | -                                                                                 | -    | 2.218                                                                             | -                                                                                 |
| Pot Cap-1 Maneuver       | 341                                                                               | 629                                                                               | -                                                                                 | -    | 1125                                                                              | -                                                                                 |
| Stage 1                  | 659                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 675                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Platoon blocked, %       |                                                                                   |                                                                                   | -                                                                                 | -    |                                                                                   | -                                                                                 |
| Mov Cap-1 Maneuver       | 332                                                                               | 629                                                                               | -                                                                                 | -    | 1125                                                                              | -                                                                                 |
| Mov Cap-2 Maneuver       | 332                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 1                  | 659                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Stage 2                  | 657                                                                               | -                                                                                 | -                                                                                 | -    | -                                                                                 | -                                                                                 |
| Approach                 | WB                                                                                | NB                                                                                | SB                                                                                |      |                                                                                   |                                                                                   |
| HCM Control Delay, s     | 14.9                                                                              | 0                                                                                 | 0.7                                                                               |      |                                                                                   |                                                                                   |
| HCM LOS                  | B                                                                                 |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1WBLn2                                                                     | SBL                                                                               | SBT  |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | - 332 629 1125                                                                    | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | - 0.141 0.052 0.026                                                               | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | - 17.6 11 8.3                                                                     | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM Lane LOS             | -                                                                                 | - C B A                                                                           | -                                                                                 | -    |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | - 0.5 0.2 0.1                                                                     | -                                                                                 | -    |                                                                                   |                                                                                   |

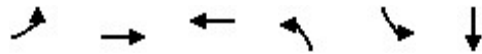
| Intersection             |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0                                                                                 |                                                                                   |       |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR                                                                               | NBL   | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |  |       |  |  |  |
| Traffic Vol, veh/h       | 0                                                                                 | 0                                                                                 | 0     | 370                                                                               | 397                                                                               | 0                                                                                 |
| Future Vol, veh/h        | 0                                                                                 | 0                                                                                 | 0     | 370                                                                               | 397                                                                               | 0                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0     | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Yield                                                                             | Yield                                                                             | Free  | Free                                                                              | Stop                                                                              | Stop                                                                              |
| RT Channelized           | -                                                                                 | None                                                                              | -     | None                                                                              | -                                                                                 | Yield                                                                             |
| Storage Length           | 75                                                                                | 0                                                                                 | -     | -                                                                                 | -                                                                                 | 150                                                                               |
| Veh in Median Storage, # | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -                                                                                 | -     | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92    | 92                                                                                | 92                                                                                | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2     | 2                                                                                 | 2                                                                                 | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 0                                                                                 | 0     | 402                                                                               | 432                                                                               | 0                                                                                 |
| Major/Minor              |                                                                                   | Major1                                                                            |       | Minor2                                                                            |                                                                                   |                                                                                   |
| Conflicting Flow All     |                                                                                   | 0                                                                                 |       | 0 402 0                                                                           |                                                                                   |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 |       | - 0 -                                                                             |                                                                                   |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 |       | - 402 -                                                                           |                                                                                   |                                                                                   |
| Critical Hdwy            |                                                                                   | 4.12                                                                              |       | - 6.52 6.22                                                                       |                                                                                   |                                                                                   |
| Critical Hdwy Stg 1      |                                                                                   | -                                                                                 |       | - - -                                                                             |                                                                                   |                                                                                   |
| Critical Hdwy Stg 2      |                                                                                   | -                                                                                 |       | - 5.52 -                                                                          |                                                                                   |                                                                                   |
| Follow-up Hdwy           |                                                                                   | 2.218                                                                             |       | - 4.018 3.318                                                                     |                                                                                   |                                                                                   |
| Pot Cap-1 Maneuver       |                                                                                   | -                                                                                 |       | - 537 -                                                                           |                                                                                   |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 |       | - - -                                                                             |                                                                                   |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 |       | - 600 -                                                                           |                                                                                   |                                                                                   |
| Platoon blocked, %       |                                                                                   | -                                                                                 |       | -                                                                                 |                                                                                   |                                                                                   |
| Mov Cap-1 Maneuver       |                                                                                   | -                                                                                 |       | - 0 -                                                                             |                                                                                   |                                                                                   |
| Mov Cap-2 Maneuver       |                                                                                   | -                                                                                 |       | - 0 -                                                                             |                                                                                   |                                                                                   |
| Stage 1                  |                                                                                   | -                                                                                 |       | - 0 -                                                                             |                                                                                   |                                                                                   |
| Stage 2                  |                                                                                   | -                                                                                 |       | - 0 -                                                                             |                                                                                   |                                                                                   |
| Approach                 |                                                                                   | NB                                                                                |       | SB                                                                                |                                                                                   |                                                                                   |
| HCM Control Delay, s     |                                                                                   | 0                                                                                 |       |                                                                                   |                                                                                   |                                                                                   |
| HCM LOS                  |                                                                                   |                                                                                   |       | -                                                                                 |                                                                                   |                                                                                   |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT                                                                               | SBLn1 | SBLn2                                                                             |                                                                                   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |
| HCM Control Delay (s)    | 0                                                                                 | -                                                                                 | -     | 0                                                                                 |                                                                                   |                                                                                   |
| HCM Lane LOS             | A                                                                                 | -                                                                                 | -     | A                                                                                 |                                                                                   |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -                                                                                 | -     | -                                                                                 |                                                                                   |                                                                                   |



| Intersection             |                                                                                   |          |                                                                                   |      |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 2.2                                                                               |          |                                                                                   |      |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR  | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |      |       |  |
| Traffic Vol, veh/h       | 43                                                                                | 3        | 49                                                                                | 47   | 0     | 55                                                                                |
| Future Vol, veh/h        | 43                                                                                | 3        | 49                                                                                | 47   | 0     | 55                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0    | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -    | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -    | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -    | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92   | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2    | 2     | 2                                                                                 |
| Mvmt Flow                | 47                                                                                | 3        | 53                                                                                | 51   | 0     | 60                                                                                |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |      |       |                                                                                   |
| Conflicting Flow All     | 139                                                                               | 79       | 0                                                                                 | 0    | 104   | 0                                                                                 |
| Stage 1                  | 79                                                                                | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 60                                                                                | -        | -                                                                                 | -    | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -    | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -    | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -    | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -    | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 854                                                                               | 981      | -                                                                                 | -    | 1488  | -                                                                                 |
| Stage 1                  | 944                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 963                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -    |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 854                                                                               | 981      | -                                                                                 | -    | 1488  | -                                                                                 |
| Mov Cap-2 Maneuver       | 854                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 1                  | 944                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 963                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |      |       |                                                                                   |
| HCM Control Delay, s     | 9.4                                                                               | 0        | 0                                                                                 |      |       |                                                                                   |
| HCM LOS                  | A                                                                                 |          |                                                                                   |      |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT  |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 861                                                                               | 1488 | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.058                                                                             | -    | -     |                                                                                   |
| HCM Control Delay (s)    | -                                                                                 | -        | 9.4                                                                               | 0    | -     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | A                                                                                 | A    | -     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.2                                                                               | 0    | -     |                                                                                   |

Queues  
1: 18th & Rte 14

2020 Bridge Open AM  
09/29/2020



| Lane Group              | EBL  | EBT  | WBT  | NBL  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 113  | 1156 | 1218 | 3    | 30   | 50   |
| v/c Ratio               | 0.49 | 0.61 | 0.65 | 0.04 | 0.08 | 0.07 |
| Control Delay           | 42.8 | 13.5 | 23.1 | 44.3 | 29.0 | 0.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 42.8 | 13.5 | 23.1 | 44.3 | 29.0 | 0.2  |
| Queue Length 50th (ft)  | 54   | 175  | 181  | 2    | 11   | 0    |
| Queue Length 95th (ft)  | 120  | 280  | 272  | 11   | 41   | 0    |
| Internal Link Dist (ft) |      | 318  | 612  |      |      | 209  |
| Turn Bay Length (ft)    | 200  |      |      | 50   | 125  |      |
| Base Capacity (vph)     | 317  | 2199 | 2404 | 74   | 378  | 717  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.36 | 0.53 | 0.51 | 0.04 | 0.08 | 0.07 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | WBL  | WBT   | WBR  | NBL  | NBT  | SBL   | SBT  |
|-------------------------|------|------|------|-------|------|------|------|-------|------|
| Lane Group Flow (vph)   | 537  | 724  | 11   | 951   | 248  | 27   | 30   | 111   | 91   |
| v/c Ratio               | 1.05 | 0.56 | 0.02 | 1.02  | 0.29 | 0.24 | 0.18 | 0.93  | 0.42 |
| Control Delay           | 90.2 | 11.3 | 6.2  | 66.5  | 7.2  | 56.7 | 35.5 | 118.9 | 19.0 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  |
| Total Delay             | 90.2 | 11.3 | 6.2  | 66.5  | 7.2  | 56.7 | 35.5 | 118.9 | 19.0 |
| Queue Length 50th (ft)  | ~403 | 253  | 2    | ~785  | 36   | 20   | 12   | 87    | 5    |
| Queue Length 95th (ft)  | #623 | 349  | 6    | #1034 | 84   | 51   | 42   | #201  | 57   |
| Internal Link Dist (ft) |      | 2376 |      | 867   |      |      | 335  |       | 520  |
| Turn Bay Length (ft)    | 660  |      | 100  |       | 230  | 50   |      | 150   |      |
| Base Capacity (vph)     | 510  | 1285 | 465  | 928   | 868  | 113  | 164  | 120   | 217  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    |
| Reduced v/c Ratio       | 1.05 | 0.56 | 0.02 | 1.02  | 0.29 | 0.24 | 0.18 | 0.93  | 0.42 |

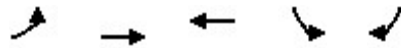
#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



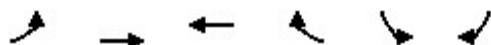
| Lane Group              | EBL   | EBT  | WBT   | SBL   | SBR  |
|-------------------------|-------|------|-------|-------|------|
| Lane Group Flow (vph)   | 214   | 524  | 1214  | 275   | 358  |
| v/c Ratio               | 0.98  | 0.37 | 1.10  | 0.99  | 0.75 |
| Control Delay           | 106.1 | 6.5  | 86.2  | 108.5 | 25.0 |
| Queue Delay             | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  |
| Total Delay             | 106.1 | 6.5  | 86.2  | 108.5 | 25.0 |
| Queue Length 50th (ft)  | 146   | 141  | ~1247 | 253   | 72   |
| Queue Length 95th (ft)  | #316  | 190  | #1517 | #439  | 195  |
| Internal Link Dist (ft) |       | 343  | 1006  | 823   |      |
| Turn Bay Length (ft)    | 233   |      |       | 280   | 115  |
| Base Capacity (vph)     | 218   | 1413 | 1103  | 279   | 478  |
| Starvation Cap Reductn  | 0     | 0    | 0     | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0     | 0     | 0    |
| Storage Cap Reductn     | 0     | 0    | 0     | 0     | 0    |
| Reduced v/c Ratio       | 0.98  | 0.37 | 1.10  | 0.99  | 0.75 |

#### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
4: Rte 14 & 3rd

2020 Bridge Open AM  
09/29/2020



| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 98   | 793  | 866  | 242  | 125  | 325  |
| v/c Ratio               | 0.35 | 0.36 | 0.58 | 0.34 | 0.24 | 0.63 |
| Control Delay           | 31.9 | 5.5  | 16.9 | 11.0 | 29.2 | 10.3 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 31.9 | 5.5  | 16.9 | 11.0 | 29.2 | 10.3 |
| Queue Length 50th (ft)  | 34   | 54   | 132  | 39   | 22   | 0    |
| Queue Length 95th (ft)  | 97   | 107  | 240  | 108  | 57   | 73   |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 514  | 3405 | 2758 | 1251 | 2071 | 1084 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.19 | 0.23 | 0.31 | 0.19 | 0.06 | 0.30 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 174  | 80   | 2    | 234  | 838  | 3    | 570  | 351  |
| v/c Ratio               | 0.70 | 0.19 | 0.01 | 0.59 | 0.94 | 0.01 | 0.65 | 0.40 |
| Control Delay           | 47.4 | 8.4  | 33.5 | 14.3 | 42.8 | 6.7  | 22.4 | 6.6  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 47.4 | 8.4  | 33.5 | 14.3 | 42.8 | 6.7  | 22.4 | 6.6  |
| Queue Length 50th (ft)  | 85   | 0    | 1    | 52   | 434  | 1    | 237  | 37   |
| Queue Length 95th (ft)  | #169 | 36   | 8    | 85   | #693 | 4    | 351  | 94   |
| Internal Link Dist (ft) |      | 839  | 337  |      | 2047 |      | 739  |      |
| Turn Bay Length (ft)    | 150  |      |      | 200  |      | 100  |      | 100  |
| Base Capacity (vph)     | 247  | 422  | 135  | 398  | 890  | 220  | 879  | 870  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.70 | 0.19 | 0.01 | 0.59 | 0.94 | 0.01 | 0.65 | 0.40 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: 18th & Rte 14

2020 Bridge Open PM  
09/29/2020

|                         |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBT                                                                               | SBL                                                                                | SBT                                                                                 |
| Lane Group Flow (vph)   | 193                                                                               | 1479                                                                              | 1                                                                                 | 1315                                                                              | 51                                                                                | 1                                                                                 | 88                                                                                 | 157                                                                                 |
| v/c Ratio               | 0.70                                                                              | 0.80                                                                              | 0.01                                                                              | 0.80                                                                              | 0.55                                                                              | 0.00                                                                              | 0.30                                                                               | 0.23                                                                                |
| Control Delay           | 51.5                                                                              | 23.2                                                                              | 43.0                                                                              | 33.0                                                                              | 68.3                                                                              | 0.0                                                                               | 38.1                                                                               | 0.8                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |
| Total Delay             | 51.5                                                                              | 23.2                                                                              | 43.0                                                                              | 33.0                                                                              | 68.3                                                                              | 0.0                                                                               | 38.1                                                                               | 0.8                                                                                 |
| Queue Length 50th (ft)  | 113                                                                               | 342                                                                               | 1                                                                                 | 264                                                                               | 31                                                                                | 0                                                                                 | 47                                                                                 | 0                                                                                   |
| Queue Length 95th (ft)  | 186                                                                               | #632                                                                              | 6                                                                                 | 332                                                                               | #88                                                                               | 0                                                                                 | 96                                                                                 | 0                                                                                   |
| Internal Link Dist (ft) |                                                                                   | 318                                                                               |                                                                                   | 612                                                                               |                                                                                   | 207                                                                               |                                                                                    | 209                                                                                 |
| Turn Bay Length (ft)    | 200                                                                               |                                                                                   | 350                                                                               |                                                                                   | 50                                                                                |                                                                                   | 125                                                                                |                                                                                     |
| Base Capacity (vph)     | 350                                                                               | 1899                                                                              | 136                                                                               | 1764                                                                              | 93                                                                                | 614                                                                               | 290                                                                                | 679                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Reduced v/c Ratio       | 0.55                                                                              | 0.78                                                                              | 0.01                                                                              | 0.75                                                                              | 0.55                                                                              | 0.00                                                                              | 0.30                                                                               | 0.23                                                                                |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



| Lane Group              | EBL  | EBT   | WBL  | WBT  | WBR  | NBL   | NBT  | SBL  | SBT  |
|-------------------------|------|-------|------|------|------|-------|------|------|------|
| Lane Group Flow (vph)   | 124  | 1363  | 61   | 1078 | 50   | 77    | 96   | 84   | 120  |
| v/c Ratio               | 0.46 | 1.03  | 0.43 | 0.81 | 0.04 | 0.83  | 0.41 | 0.74 | 0.47 |
| Control Delay           | 8.8  | 53.8  | 24.2 | 19.6 | 0.5  | 116.7 | 16.6 | 97.3 | 18.2 |
| Queue Delay             | 0.0  | 0.0   | 0.0  | 0.1  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| Total Delay             | 8.8  | 53.8  | 24.2 | 19.7 | 0.5  | 116.7 | 16.6 | 97.3 | 18.2 |
| Queue Length 50th (ft)  | 19   | ~1326 | 9    | 601  | 0    | 70    | 1    | 76   | 6    |
| Queue Length 95th (ft)  | 31   | #1596 | 51   | 824  | 5    | #167  | 57   | #165 | 68   |
| Internal Link Dist (ft) |      | 2376  |      | 867  |      |       | 335  |      | 520  |
| Turn Bay Length (ft)    | 660  |       | 100  |      | 230  | 50    |      | 150  |      |
| Base Capacity (vph)     | 267  | 1321  | 142  | 1333 | 1154 | 93    | 236  | 113  | 254  |
| Starvation Cap Reductn  | 0    | 0     | 0    | 8    | 0    | 0     | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.46 | 1.03  | 0.43 | 0.81 | 0.04 | 0.83  | 0.41 | 0.74 | 0.47 |

#### Intersection Summary

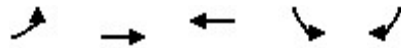
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.





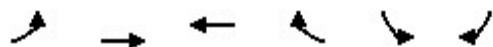
| Lane Group              | EBL   | EBT  | WBT   | SBL   | SBR  |
|-------------------------|-------|------|-------|-------|------|
| Lane Group Flow (vph)   | 228   | 1176 | 1114  | 363   | 234  |
| v/c Ratio               | 1.01  | 0.88 | 1.09  | 1.01  | 0.47 |
| Control Delay           | 112.7 | 25.5 | 86.2  | 105.0 | 9.4  |
| Queue Delay             | 0.0   | 0.1  | 0.0   | 0.0   | 0.0  |
| Total Delay             | 112.7 | 25.7 | 86.2  | 105.0 | 9.4  |
| Queue Length 50th (ft)  | ~162  | 757  | ~1137 | ~340  | 4    |
| Queue Length 95th (ft)  | #340  | 1062 | #1403 | #549  | 78   |
| Internal Link Dist (ft) |       | 343  | 1006  | 823   |      |
| Turn Bay Length (ft)    | 233   |      |       | 280   | 115  |
| Base Capacity (vph)     | 226   | 1329 | 1022  | 359   | 503  |
| Starvation Cap Reductn  | 0     | 6    | 0     | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0     | 0     | 0    |
| Storage Cap Reductn     | 0     | 0    | 0     | 0     | 0    |
| Reduced v/c Ratio       | 1.01  | 0.89 | 1.09  | 1.01  | 0.47 |

#### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
4: Rte 14 & 3rd

2020 Bridge Open PM  
09/29/2020



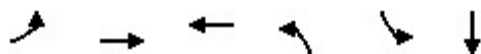
| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 368  | 1143 | 924  | 228  | 135  | 188  |
| v/c Ratio               | 0.74 | 0.44 | 0.70 | 0.36 | 0.36 | 0.55 |
| Control Delay           | 39.6 | 4.8  | 27.3 | 16.6 | 42.7 | 13.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 39.6 | 4.8  | 27.3 | 16.6 | 42.7 | 13.5 |
| Queue Length 50th (ft)  | 179  | 97   | 216  | 59   | 35   | 0    |
| Queue Length 95th (ft)  | 330  | 150  | 363  | 145  | 77   | 66   |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 825  | 3317 | 1822 | 847  | 774  | 502  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.45 | 0.34 | 0.51 | 0.27 | 0.17 | 0.37 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | WBT  | NBL  | NBT  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 283  | 222  | 4    | 27   | 490  | 603  | 114  |
| v/c Ratio               | 0.62 | 0.33 | 0.04 | 0.10 | 0.71 | 0.87 | 0.15 |
| Control Delay           | 30.3 | 1.9  | 32.0 | 8.8  | 26.8 | 37.6 | 0.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 30.3 | 1.9  | 32.0 | 8.8  | 26.8 | 37.6 | 0.4  |
| Queue Length 50th (ft)  | 113  | 0    | 2    | 5    | 190  | 255  | 0    |
| Queue Length 95th (ft)  | 190  | 11   | 11   | 15   | 298  | #443 | 0    |
| Internal Link Dist (ft) |      | 839  | 337  |      | 2047 | 739  |      |
| Turn Bay Length (ft)    | 150  |      |      | 200  |      |      | 100  |
| Base Capacity (vph)     | 460  | 668  | 107  | 280  | 693  | 693  | 739  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.62 | 0.33 | 0.04 | 0.10 | 0.71 | 0.87 | 0.15 |

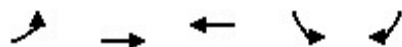
#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



| Lane Group              | EBL  | EBT  | WBT  | NBL  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 202  | 923  | 1178 | 1    | 64   | 125  |
| v/c Ratio               | 0.68 | 0.47 | 0.74 | 0.02 | 0.17 | 0.15 |
| Control Delay           | 45.5 | 12.0 | 29.7 | 44.0 | 29.3 | 0.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 45.5 | 12.0 | 29.7 | 44.0 | 29.3 | 0.4  |
| Queue Length 50th (ft)  | 103  | 138  | 200  | 1    | 27   | 0    |
| Queue Length 95th (ft)  | 183  | 205  | 285  | 6    | 71   | 0    |
| Internal Link Dist (ft) |      | 318  | 612  |      |      | 209  |
| Turn Bay Length (ft)    | 200  |      |      | 50   | 125  |      |
| Base Capacity (vph)     | 394  | 2012 | 1725 | 58   | 372  | 814  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.51 | 0.46 | 0.68 | 0.02 | 0.17 | 0.15 |
| Intersection Summary    |      |      |      |      |      |      |

|                         |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | SBL                                                                                 | SBT                                                                                 |
| Lane Group Flow (vph)   | 70                                                                                | 914                                                                               | 50                                                                                | 935                                                                               | 39                                                                                | 36                                                                                | 74                                                                                 | 21                                                                                  | 62                                                                                  |
| v/c Ratio               | 0.20                                                                              | 0.73                                                                              | 0.14                                                                              | 0.74                                                                              | 0.04                                                                              | 0.32                                                                              | 0.37                                                                               | 0.19                                                                                | 0.33                                                                                |
| Control Delay           | 3.9                                                                               | 15.7                                                                              | 3.4                                                                               | 16.2                                                                              | 0.1                                                                               | 55.6                                                                              | 17.9                                                                               | 51.3                                                                                | 17.6                                                                                |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 3.9                                                                               | 15.7                                                                              | 3.4                                                                               | 16.2                                                                              | 0.1                                                                               | 55.6                                                                              | 17.9                                                                               | 51.3                                                                                | 17.6                                                                                |
| Queue Length 50th (ft)  | 8                                                                                 | 369                                                                               | 6                                                                                 | 386                                                                               | 0                                                                                 | 24                                                                                | 2                                                                                  | 14                                                                                  | 1                                                                                   |
| Queue Length 95th (ft)  | 16                                                                                | 531                                                                               | 12                                                                                | 554                                                                               | 0                                                                                 | 58                                                                                | 47                                                                                 | 40                                                                                  | 42                                                                                  |
| Internal Link Dist (ft) |                                                                                   | 2376                                                                              |                                                                                   | 867                                                                               |                                                                                   |                                                                                   | 335                                                                                |                                                                                     | 520                                                                                 |
| Turn Bay Length (ft)    | 660                                                                               |                                                                                   | 100                                                                               |                                                                                   | 230                                                                               | 50                                                                                |                                                                                    | 150                                                                                 |                                                                                     |
| Base Capacity (vph)     | 343                                                                               | 1247                                                                              | 356                                                                               | 1260                                                                              | 1101                                                                              | 112                                                                               | 199                                                                                | 111                                                                                 | 190                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio       | 0.20                                                                              | 0.73                                                                              | 0.14                                                                              | 0.74                                                                              | 0.04                                                                              | 0.32                                                                              | 0.37                                                                               | 0.19                                                                                | 0.33                                                                                |
| Intersection Summary    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |



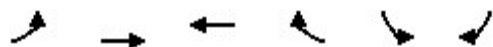
| Lane Group              | EBL  | EBT  | WBT  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph)   | 182  | 698  | 929  | 201  | 224  |
| v/c Ratio               | 0.69 | 0.53 | 0.93 | 0.64 | 0.48 |
| Control Delay           | 38.4 | 8.6  | 37.9 | 51.1 | 9.3  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 38.4 | 8.6  | 37.9 | 51.1 | 9.3  |
| Queue Length 50th (ft)  | 35   | 184  | 504  | 131  | 0    |
| Queue Length 95th (ft)  | 103  | 258  | #850 | #231 | 68   |
| Internal Link Dist (ft) |      | 343  | 1006 | 823  |      |
| Turn Bay Length (ft)    | 233  |      |      | 280  | 115  |
| Base Capacity (vph)     | 305  | 1492 | 1131 | 316  | 466  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.60 | 0.47 | 0.82 | 0.64 | 0.48 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
4: Rte 14 & 3rd

2020 Bridge Open WE  
09/29/2020



| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 193  | 691  | 710  | 175  | 108  | 209  |
| v/c Ratio               | 0.53 | 0.30 | 0.60 | 0.31 | 0.24 | 0.53 |
| Control Delay           | 29.6 | 4.8  | 20.2 | 12.1 | 29.0 | 10.7 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 29.6 | 4.8  | 20.2 | 12.1 | 29.0 | 10.7 |
| Queue Length 50th (ft)  | 63   | 44   | 111  | 28   | 18   | 0    |
| Queue Length 95th (ft)  | 150  | 80   | 203  | 83   | 48   | 59   |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 860  | 3514 | 2532 | 1151 | 1500 | 809  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.22 | 0.20 | 0.28 | 0.15 | 0.07 | 0.26 |
| Intersection Summary    |      |      |      |      |      |      |

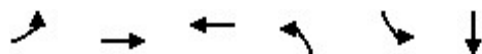


| Lane Group              | EBL  | EBT  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 20   | 21   | 5    | 21   | 416  | 1    | 443  | 37   |
| v/c Ratio               | 0.04 | 0.03 | 0.03 | 0.07 | 0.81 | 0.00 | 0.86 | 0.06 |
| Control Delay           | 15.8 | 0.1  | 24.8 | 9.6  | 36.5 | 9.0  | 41.6 | 0.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 15.8 | 0.1  | 24.8 | 9.6  | 36.5 | 9.0  | 41.6 | 0.2  |
| Queue Length 50th (ft)  | 5    | 0    | 1    | 4    | 152  | 0    | 166  | 0    |
| Queue Length 95th (ft)  | 19   | 0    | 10   | 14   | #291 | 2    | #316 | 0    |
| Internal Link Dist (ft) |      | 839  | 337  |      | 2047 |      | 739  |      |
| Turn Bay Length (ft)    | 150  |      |      | 200  |      | 100  |      | 100  |
| Base Capacity (vph)     | 459  | 773  | 157  | 323  | 516  | 344  | 515  | 638  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.04 | 0.03 | 0.03 | 0.07 | 0.81 | 0.00 | 0.86 | 0.06 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.





| Lane Group              | EBL  | EBT  | WBT  | NBL  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 127  | 1085 | 1071 | 3    | 11   | 47   |
| v/c Ratio               | 0.51 | 0.59 | 0.63 | 0.04 | 0.03 | 0.06 |
| Control Delay           | 40.8 | 13.9 | 24.1 | 43.3 | 27.9 | 0.1  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 40.8 | 13.9 | 24.1 | 43.3 | 27.9 | 0.1  |
| Queue Length 50th (ft)  | 58   | 165  | 158  | 1    | 4    | 0    |
| Queue Length 95th (ft)  | 128  | 256  | 242  | 11   | 21   | 0    |
| Internal Link Dist (ft) |      | 318  | 612  |      |      | 209  |
| Turn Bay Length (ft)    | 200  |      |      | 50   | 125  |      |
| Base Capacity (vph)     | 371  | 2149 | 2250 | 76   | 402  | 779  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.34 | 0.50 | 0.48 | 0.04 | 0.03 | 0.06 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | WBL  | WBT  | WBR  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 345  | 666  | 11   | 808  | 323  | 24   | 39   | 161  | 232  |
| v/c Ratio               | 0.91 | 0.61 | 0.03 | 0.89 | 0.36 | 0.20 | 0.12 | 0.69 | 0.50 |
| Control Delay           | 56.0 | 17.4 | 6.2  | 39.9 | 5.1  | 44.0 | 29.7 | 59.2 | 9.8  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 56.0 | 17.4 | 6.2  | 39.9 | 5.1  | 44.0 | 29.7 | 59.2 | 9.8  |
| Queue Length 50th (ft)  | 174  | 281  | 2    | 502  | 23   | 15   | 16   | 108  | 2    |
| Queue Length 95th (ft)  | #346 | 397  | 7    | #760 | 75   | 41   | 46   | #199 | 71   |
| Internal Link Dist (ft) |      | 2376 |      | 867  |      |      | 335  |      | 520  |
| Turn Bay Length (ft)    | 660  |      | 100  |      | 230  | 50   |      | 150  |      |
| Base Capacity (vph)     | 381  | 1089 | 425  | 904  | 901  | 119  | 314  | 234  | 461  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.91 | 0.61 | 0.03 | 0.89 | 0.36 | 0.20 | 0.12 | 0.69 | 0.50 |

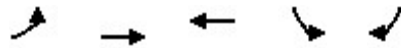
#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
3: Rte 14 & 9th

2020 Bridge Closed AM

09/29/2020



| Lane Group              | EBL   | EBT  | WBT   | SBL   | SBR  |
|-------------------------|-------|------|-------|-------|------|
| Lane Group Flow (vph)   | 201   | 571  | 1559  | 402   | 285  |
| v/c Ratio               | 1.12  | 0.42 | 1.42  | 1.27  | 0.62 |
| Control Delay           | 147.0 | 8.1  | 221.7 | 188.8 | 20.6 |
| Queue Delay             | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  |
| Total Delay             | 147.0 | 8.1  | 221.7 | 188.8 | 20.6 |
| Queue Length 50th (ft)  | ~159  | 176  | ~1912 | ~460  | 56   |
| Queue Length 95th (ft)  | #324  | 236  | #2180 | #668  | 157  |
| Internal Link Dist (ft) |       | 343  | 1006  | 823   |      |
| Turn Bay Length (ft)    | 233   |      |       | 280   | 115  |
| Base Capacity (vph)     | 180   | 1373 | 1095  | 317   | 459  |
| Starvation Cap Reductn  | 0     | 0    | 0     | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0     | 0     | 0    |
| Storage Cap Reductn     | 0     | 0    | 0     | 0     | 0    |
| Reduced v/c Ratio       | 1.12  | 0.42 | 1.42  | 1.27  | 0.62 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

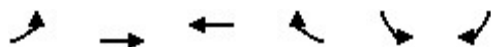
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
4: Rte 14 & 3rd

2020 Bridge Closed AM  
09/29/2020



| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 171  | 761  | 945  | 130  | 64   | 550  |
| v/c Ratio               | 0.60 | 0.35 | 0.74 | 0.22 | 0.08 | 0.86 |
| Control Delay           | 47.6 | 9.8  | 29.7 | 18.0 | 27.3 | 25.3 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 47.6 | 9.8  | 29.7 | 18.0 | 27.3 | 25.3 |
| Queue Length 50th (ft)  | 86   | 92   | 224  | 33   | 13   | 95   |
| Queue Length 95th (ft)  | 197  | 204  | 419  | 99   | 32   | 260  |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 415  | 2762 | 1763 | 806  | 1797 | 1002 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.41 | 0.28 | 0.54 | 0.16 | 0.04 | 0.55 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | WBT  | NBL  | NBT  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 258  | 61   | 6    | 160  | 550  | 603  | 264  |
| v/c Ratio               | 0.70 | 0.09 | 0.04 | 0.58 | 0.81 | 0.88 | 0.36 |
| Control Delay           | 35.2 | 0.3  | 24.0 | 19.4 | 32.5 | 39.5 | 4.9  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 35.2 | 0.3  | 24.0 | 19.4 | 32.5 | 39.5 | 4.9  |
| Queue Length 50th (ft)  | 101  | 0    | 1    | 34   | 225  | 257  | 7    |
| Queue Length 95th (ft)  | #188 | 0    | 12   | 71   | #388 | #447 | 53   |
| Internal Link Dist (ft) |      | 839  | 337  |      | 2047 | 739  |      |
| Turn Bay Length (ft)    | 150  |      |      | 200  |      |      | 100  |
| Base Capacity (vph)     | 368  | 673  | 150  | 274  | 683  | 683  | 732  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.70 | 0.09 | 0.04 | 0.58 | 0.81 | 0.88 | 0.36 |

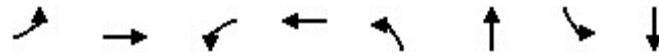
#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: 18th & Rte 14

2020 Bridge Closed PM

09/29/2020



| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 188  | 1311 | 1    | 1205 | 26   | 4    | 79   | 195  |
| v/c Ratio               | 0.67 | 0.71 | 0.01 | 0.76 | 0.30 | 0.01 | 0.22 | 0.25 |
| Control Delay           | 47.0 | 20.0 | 41.0 | 31.0 | 52.3 | 17.0 | 32.2 | 0.8  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 47.0 | 20.0 | 41.0 | 31.0 | 52.3 | 17.0 | 32.2 | 0.8  |
| Queue Length 50th (ft)  | 97   | 235  | 1    | 206  | 14   | 0    | 33   | 0    |
| Queue Length 95th (ft)  | 175  | #516 | 6    | 295  | 43   | 8    | 84   | 0    |
| Internal Link Dist (ft) |      | 318  |      | 612  |      | 207  |      | 209  |
| Turn Bay Length (ft)    | 200  |      | 350  |      | 50   |      | 125  |      |
| Base Capacity (vph)     | 367  | 1863 | 144  | 1701 | 86   | 496  | 355  | 767  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.51 | 0.70 | 0.01 | 0.71 | 0.30 | 0.01 | 0.22 | 0.25 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

|                         |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                 | SBL                                                                                 | SBT                                                                                 |
| Lane Group Flow (vph)   | 104                                                                               | 1237                                                                              | 66                                                                                | 998                                                                               | 140                                                                               | 79                                                                                | 121                                                                                 | 150                                                                                 | 175                                                                                 |
| v/c Ratio               | 0.40                                                                              | 1.01                                                                              | 0.47                                                                              | 0.80                                                                              | 0.13                                                                              | 0.68                                                                              | 0.37                                                                                | 0.94                                                                                | 0.47                                                                                |
| Control Delay           | 9.2                                                                               | 50.6                                                                              | 26.9                                                                              | 23.2                                                                              | 2.6                                                                               | 85.6                                                                              | 14.2                                                                                | 115.1                                                                               | 13.1                                                                                |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 9.2                                                                               | 50.6                                                                              | 26.9                                                                              | 23.2                                                                              | 2.6                                                                               | 85.6                                                                              | 14.2                                                                                | 115.1                                                                               | 13.1                                                                                |
| Queue Length 50th (ft)  | 21                                                                                | ~1076                                                                             | 13                                                                                | 607                                                                               | 9                                                                                 | 69                                                                                | 6                                                                                   | 137                                                                                 | 6                                                                                   |
| Queue Length 95th (ft)  | 35                                                                                | #1441                                                                             | 59                                                                                | 823                                                                               | 32                                                                                | #151                                                                              | 66                                                                                  | #277                                                                                | 77                                                                                  |
| Internal Link Dist (ft) |                                                                                   | 2376                                                                              |                                                                                   | 867                                                                               |                                                                                   |                                                                                   | 335                                                                                 |                                                                                     | 520                                                                                 |
| Turn Bay Length (ft)    | 660                                                                               |                                                                                   | 100                                                                               |                                                                                   | 230                                                                               | 50                                                                                |                                                                                     | 150                                                                                 |                                                                                     |
| Base Capacity (vph)     | 257                                                                               | 1230                                                                              | 141                                                                               | 1241                                                                              | 1091                                                                              | 116                                                                               | 328                                                                                 | 160                                                                                 | 374                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio       | 0.40                                                                              | 1.01                                                                              | 0.47                                                                              | 0.80                                                                              | 0.13                                                                              | 0.68                                                                              | 0.37                                                                                | 0.94                                                                                | 0.47                                                                                |

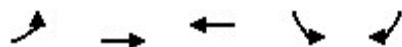
#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

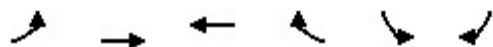


| Lane Group              | EBL   | EBT   | WBT   | SBL   | SBR  |
|-------------------------|-------|-------|-------|-------|------|
| Lane Group Flow (vph)   | 222   | 1205  | 1343  | 503   | 254  |
| v/c Ratio               | 1.15  | 0.94  | 1.34  | 1.24  | 0.50 |
| Control Delay           | 156.3 | 34.9  | 190.2 | 172.5 | 17.2 |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Delay             | 156.3 | 34.9  | 190.2 | 172.5 | 17.2 |
| Queue Length 50th (ft)  | ~187  | 898   | ~1595 | ~567  | 51   |
| Queue Length 95th (ft)  | #357  | #1334 | #1865 | #790  | 138  |
| Internal Link Dist (ft) |       | 343   | 1006  | 823   |      |
| Turn Bay Length (ft)    | 233   |       |       | 280   | 115  |
| Base Capacity (vph)     | 193   | 1280  | 999   | 405   | 505  |
| Starvation Cap Reductn  | 0     | 0     | 0     | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0     | 0     | 0     | 0    |
| Storage Cap Reductn     | 0     | 0     | 0     | 0     | 0    |
| Reduced v/c Ratio       | 1.15  | 0.94  | 1.34  | 1.24  | 0.50 |

#### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.





| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 630  | 1072 | 917  | 228  | 76   | 466  |
| v/c Ratio               | 0.89 | 0.39 | 0.85 | 0.43 | 0.22 | 0.80 |
| Control Delay           | 46.5 | 4.7  | 43.7 | 26.0 | 45.4 | 15.7 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 46.5 | 4.7  | 43.7 | 26.0 | 45.4 | 15.7 |
| Queue Length 50th (ft)  | 369  | 80   | 304  | 90   | 25   | 0    |
| Queue Length 95th (ft)  | #698 | 194  | #499 | 189  | 48   | 100  |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 782  | 2934 | 1119 | 540  | 720  | 700  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.81 | 0.37 | 0.82 | 0.42 | 0.11 | 0.67 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



| Lane Group              | EBL  | EBT  | WBT  | NBL  | NBT  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 261  | 171  | 1    | 30   | 558  | 630  | 51   |
| v/c Ratio               | 0.84 | 0.26 | 0.00 | 0.11 | 0.76 | 0.86 | 0.07 |
| Control Delay           | 50.8 | 1.0  | 0.0  | 9.0  | 29.4 | 36.3 | 0.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 50.8 | 1.0  | 0.0  | 9.0  | 29.4 | 36.3 | 0.2  |
| Queue Length 50th (ft)  | 111  | 0    | 0    | 6    | 235  | 281  | 0    |
| Queue Length 95th (ft)  | #237 | 0    | 0    | 17   | #364 | #475 | 0    |
| Internal Link Dist (ft) |      | 839  | 337  |      | 2047 | 739  |      |
| Turn Bay Length (ft)    | 150  |      |      | 200  |      |      | 100  |
| Base Capacity (vph)     | 311  | 657  | 419  | 273  | 732  | 733  | 759  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.84 | 0.26 | 0.00 | 0.11 | 0.76 | 0.86 | 0.07 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
1: 18th & Rte 14

2020 Bridge Closed WE  
09/29/2020

|                         |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBT                                                                               | SBL                                                                                | SBT                                                                                 |
| Lane Group Flow (vph)   | 162                                                                               | 540                                                                               | 1                                                                                 | 1017                                                                              | 1                                                                                 | 1                                                                                 | 63                                                                                 | 135                                                                                 |
| v/c Ratio               | 0.60                                                                              | 0.31                                                                              | 0.01                                                                              | 0.70                                                                              | 0.01                                                                              | 0.00                                                                              | 0.15                                                                               | 0.16                                                                                |
| Control Delay           | 43.0                                                                              | 14.1                                                                              | 39.0                                                                              | 29.5                                                                              | 42.0                                                                              | 0.0                                                                               | 26.7                                                                               | 0.4                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |
| Total Delay             | 43.0                                                                              | 14.1                                                                              | 39.0                                                                              | 29.5                                                                              | 42.0                                                                              | 0.0                                                                               | 26.7                                                                               | 0.4                                                                                 |
| Queue Length 50th (ft)  | 81                                                                                | 77                                                                                | 1                                                                                 | 169                                                                               | 1                                                                                 | 0                                                                                 | 24                                                                                 | 0                                                                                   |
| Queue Length 95th (ft)  | 147                                                                               | 154                                                                               | 6                                                                                 | 238                                                                               | 6                                                                                 | 0                                                                                 | 68                                                                                 | 0                                                                                   |
| Internal Link Dist (ft) |                                                                                   | 318                                                                               |                                                                                   | 612                                                                               |                                                                                   | 207                                                                               |                                                                                    | 209                                                                                 |
| Turn Bay Length (ft)    | 200                                                                               |                                                                                   | 350                                                                               |                                                                                   | 50                                                                                |                                                                                   | 125                                                                                |                                                                                     |
| Base Capacity (vph)     | 379                                                                               | 1773                                                                              | 163                                                                               | 1640                                                                              | 68                                                                                | 764                                                                               | 424                                                                                | 866                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Reduced v/c Ratio       | 0.43                                                                              | 0.30                                                                              | 0.01                                                                              | 0.62                                                                              | 0.01                                                                              | 0.00                                                                              | 0.15                                                                               | 0.16                                                                                |
| Intersection Summary    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |



| Lane Group              | EBL  | EBT  | WBL  | WBT  | WBR  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 41   | 727  | 43   | 793  | 24   | 33   | 64   | 24   | 37   |
| v/c Ratio               | 0.12 | 0.76 | 0.11 | 0.82 | 0.03 | 0.23 | 0.29 | 0.17 | 0.19 |
| Control Delay           | 4.1  | 19.5 | 4.0  | 23.1 | 0.0  | 33.2 | 13.6 | 31.9 | 13.7 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 4.1  | 19.5 | 4.0  | 23.1 | 0.0  | 33.2 | 13.6 | 31.9 | 13.7 |
| Queue Length 50th (ft)  | 4    | 227  | 4    | 265  | 0    | 13   | 2    | 10   | 0    |
| Queue Length 95th (ft)  | 11   | 365  | 11   | #485 | 0    | 38   | 34   | 31   | 25   |
| Internal Link Dist (ft) |      | 2376 |      | 867  |      |      | 335  |      | 520  |
| Turn Bay Length (ft)    | 660  |      | 100  |      | 230  | 50   |      | 150  |      |
| Base Capacity (vph)     | 337  | 961  | 386  | 968  | 895  | 142  | 220  | 138  | 198  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.12 | 0.76 | 0.11 | 0.82 | 0.03 | 0.23 | 0.29 | 0.17 | 0.19 |

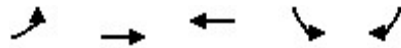
#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
3: Rte 14 & 9th

2020 Bridge Closed WE

09/29/2020



| Lane Group              | EBL  | EBT  | WBT   | SBL  | SBR  |
|-------------------------|------|------|-------|------|------|
| Lane Group Flow (vph)   | 98   | 530  | 1166  | 298  | 127  |
| v/c Ratio               | 0.68 | 0.39 | 1.03  | 0.95 | 0.33 |
| Control Delay           | 62.8 | 7.6  | 59.2  | 95.6 | 10.3 |
| Queue Delay             | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| Total Delay             | 62.8 | 7.6  | 59.2  | 95.6 | 10.3 |
| Queue Length 50th (ft)  | 38   | 157  | ~1120 | 272  | 0    |
| Queue Length 95th (ft)  | #120 | 212  | #1389 | #455 | 57   |
| Internal Link Dist (ft) |      | 343  | 1006  | 823  |      |
| Turn Bay Length (ft)    | 233  |      |       | 280  | 115  |
| Base Capacity (vph)     | 145  | 1376 | 1136  | 314  | 385  |
| Starvation Cap Reductn  | 0    | 0    | 0     | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0     | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0     | 0    | 0    |
| Reduced v/c Ratio       | 0.68 | 0.39 | 1.03  | 0.95 | 0.33 |

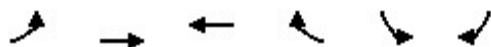
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



| Lane Group              | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 268  | 570  | 821  | 150  | 84   | 373  |
| v/c Ratio               | 0.64 | 0.23 | 0.66 | 0.25 | 0.19 | 0.71 |
| Control Delay           | 34.8 | 4.3  | 23.6 | 14.2 | 33.8 | 12.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 34.8 | 4.3  | 23.6 | 14.2 | 33.8 | 12.5 |
| Queue Length 50th (ft)  | 102  | 34   | 149  | 29   | 17   | 0    |
| Queue Length 95th (ft)  | 241  | 78   | 292  | 91   | 47   | 85   |
| Internal Link Dist (ft) |      | 208  | 582  |      | 811  |      |
| Turn Bay Length (ft)    | 125  |      |      | 50   | 150  | 125  |
| Base Capacity (vph)     | 771  | 3334 | 1994 | 912  | 1447 | 883  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.35 | 0.17 | 0.41 | 0.16 | 0.06 | 0.42 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | NBL  | NBT  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 17   | 13   | 3    | 437  | 366  | 21   |
| v/c Ratio               | 0.05 | 0.02 | 0.01 | 0.85 | 0.71 | 0.03 |
| Control Delay           | 15.9 | 0.0  | 9.0  | 40.3 | 30.5 | 0.1  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 15.9 | 0.0  | 9.0  | 40.3 | 30.5 | 0.1  |
| Queue Length 50th (ft)  | 5    | 0    | 1    | 163  | 130  | 0    |
| Queue Length 95th (ft)  | 17   | 0    | 4    | #310 | #239 | 0    |
| Internal Link Dist (ft) |      | 839  |      | 2047 | 739  |      |
| Turn Bay Length (ft)    | 150  |      | 200  |      |      | 100  |
| Base Capacity (vph)     | 342  | 803  | 385  | 515  | 515  | 638  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.05 | 0.02 | 0.01 | 0.85 | 0.71 | 0.03 |

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.