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**TRAFFIC IMPACT STUDY**

**FOR**

# Steamboat Basecamp

**Prepared For:**

May Riegler Properties
2201 Wisconsin Ave NW Suite 200
Washington, DC 20007


**By:**

Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 330W
Greenwood Village, CO 80111
(303) 221-2330

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# Figures and Tables

## Project Description

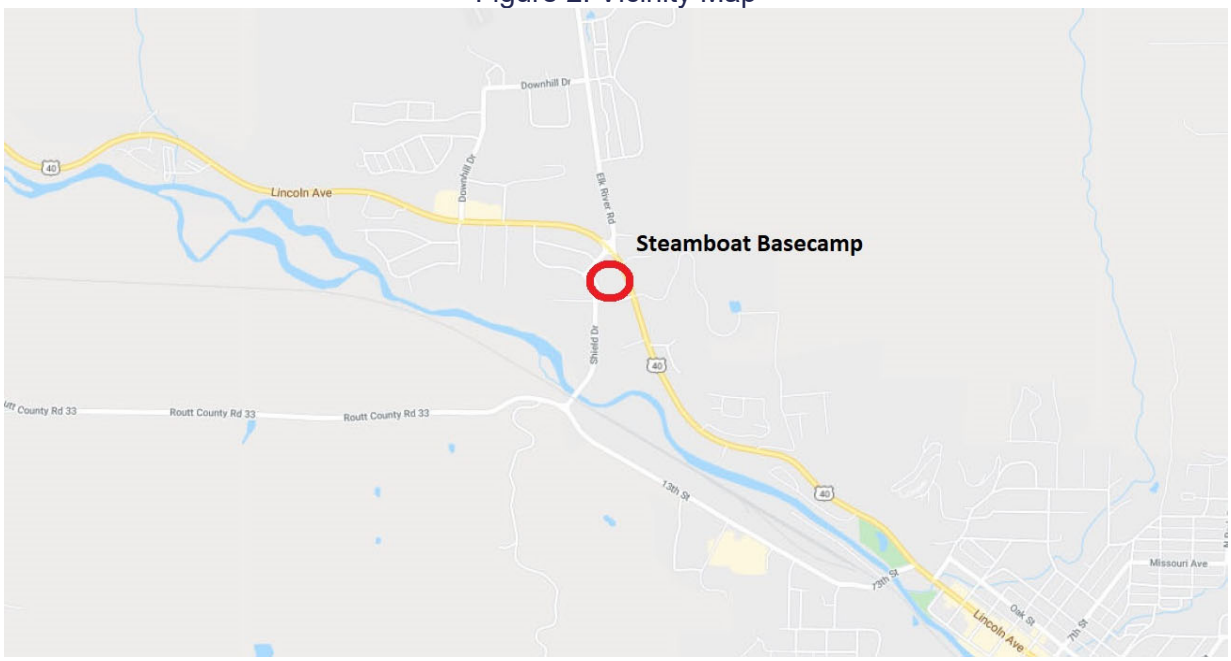
This long-term traffic impact study analyzes the effects that the Pilot Building of the Steamboat Basecamp development will have on traffic operations in the years of 2022 and 2040. The Steamboat Basecamp is a redevelopment of the old Steamboat Pilot Building. Once completed, the new building will include a variety of apartment types and other amenities, such as a fitness center and restaurant. Figure 1 shows a rendering of the proposed development.

*Figure 1: Steamboat Basecamp Rendering*

The City of Steamboat Springs has requested that a traffic impact study be prepared for the Steamboat Basecamp. A scope approval form was submitted to the City of Steamboat prior to beginning the study, and approval is pending at this time. It is included in Appendix A, and outlines the key items to be analyzed in this study. The traffic impact study has been prepared in accordance with City of Steamboat Springs requirements, assuming an opening year of 2022.

The Steamboat Basecamp is located on the northeast corner of Elk River Rd & Shield Dr, with site access on each of these roads. A vicinity map is provided in Figure 2.

Figure 2: Vicinity Map




The Steamboat Pilot Building will include several amenities that are expected to generate external trips, shown in Table 1, while others amenities will likely only be used by the residents.

Table 1: Basecamp Amenities Generating External Trips

| Amenity | Size |
|---|---|
| Multifamily Housing | 75 Units |
| Health/Fitness Club* | 4,090 SQ FT |
| Restaurant | 3,659 SQ FT |

**Class-based fitness center. No Open Gym Hours.*

The site plan is shown in Figure *3*.

Figure 3: Site Plan


Roadways in the vicinity of the site are described below:

***Lincoln Avenue (US 40)*** is an east/west roadway providing access to Elk River Rd, Curve Ct, and Downhill Dr, as well as serving as the main travel corridor and gateway into Steamboat Springs. Through the study area, US 40 alternates between a two and four lane arterial roadway with intermittent auxiliary lanes at intersections and access points. This segment of roadway is classified as NR-A by the Colorado Department of Transportation (CDOT). The posted speed limit is 40mph through the study area.

***Elk River Rd*** is a two-lane north/south roadway providing direct access to Steamboat Basecamp. Elk Road intersects US 40 in a signalized intersection to the northwest of the development.

***Curve CT*** is a two-lane east/west roadway between US 40 and Shield Dr. Many of the site trips from the south will use Curve Ct to access the site.

***Shield Dr*** is a two-lane north/south roadway between Elk River Rd and Curve Ct, and provides direct access to Steamboat Basecamp.

***Downhill Drive*** is a two lane, north/south roadway that intersects US 40 to the west of the site. While the intersection with US 40 is currently stop-controlled, the City has committed to studying the intersection to determine the most appropriate traffic control (roundabout or signal) and to design and construct an improvement in the next few years. The posted speed limit on Downhill Drive is 25mph.

# 1. Existing Conditions

## 1.1. Volumes

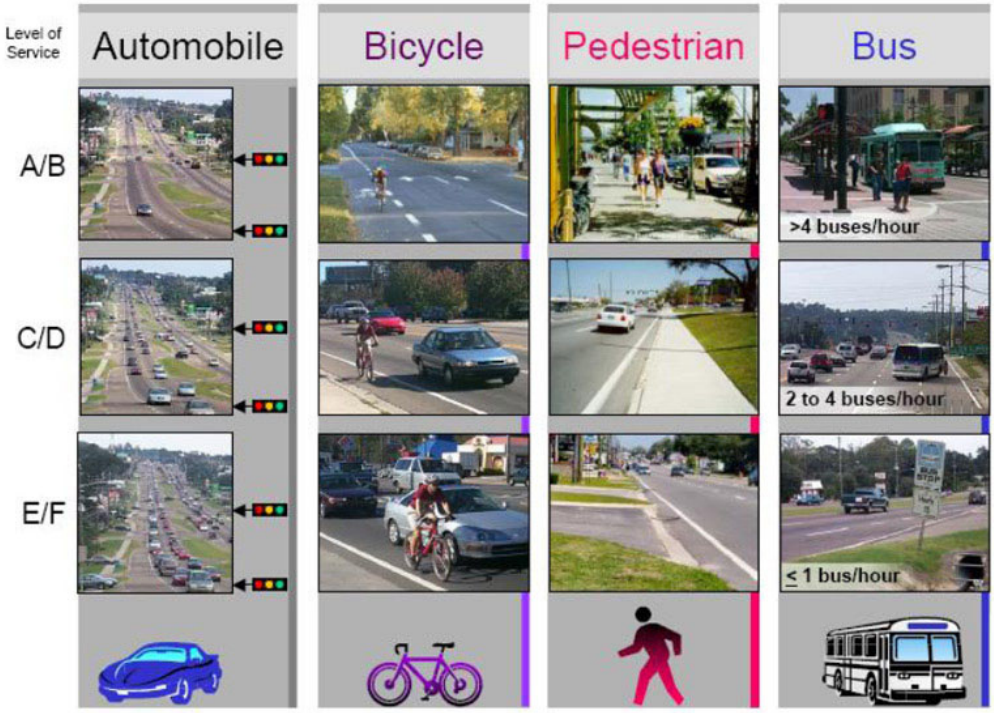
To provide a baseline condition for the traffic study, turning movement counts were taken at the following intersections.

- US 40 & Sunlight Dr/Curve CT
- US 40 & Elk River Rd
- US 40 & Downhill Dr/Riverside Dr
- Curve Plaza & Shield Dr
- Shield Dr & Elk River Rd
- Curve Plaza & Elk River Rd

The counts were collected on Tuesday, March 3, 2020 from 7:00-9:00 AM and 4:00-6:00 PM, and include pedestrian, bicycle, and heavy vehicle data. From these counts, it was determined that the AM peak hour was from 7:45-8:45 AM and the PM peak hour was from 4:45-5:45 PM. The intersection of US 40 & Downhill Dr/Riverside Dr was not included in the traffic models, since the City of Steamboat is planning on constructing intersection improvements in the next several years. The specific nature of the improvements are unknown at this time, making it difficult to accurately model the future scenario at US 40 & Downhill Dr/Riverside Dr. Counts were taken at this intersection in order to be able to assess the percent contribution that that the Steamboat Basecamp will have in regards to the intersection improvements. The traffic counts can be found in Appendix B.

## 1.2. LOS Criteria

Traffic analyses were conducted in accordance with procedures outlined in the Highway Capacity Manual, and included intersection Level-of-Service (LOS). LOS is a measure of the quality of traffic flow and ranges from LOS A (nearly ideal traffic conditions with very little delay for motorists) to LOS F (poor traffic conditions with long motorist delays). LOS C is typically considered a “good” traffic condition. LOS D or better conditions are typically desirable during peak traffic periods; however, LOS E conditions are not uncommon. LOS F, although undesirable, is also not uncommon for side street traffic movements at full movement, unsignalized intersections with high volume arterial roadways. Figure 4 illustrates examples of LOS for various modes of travel.




Source: FDOT Quality/Level of Service Handbook

Figure 4: LOS Conditions

When reporting delay and LOS, the HCM specifies that at a signalized intersection, the average intersection delay be used to derive the LOS. At a stop-controlled intersection, the worst movement is used. Table 2 provides a summary of the Highway Capacity Manual's LOS Criteria. This study area contains both signalized and unsignalized intersections.

Table 2: LOS Criteria

| Level of Service (LOS) | Signalized Intersection | Unsignalized Intersection | Traffic Characteristics |
|---|---|---|---|
| | Average Intersection Delay (sec/veh) | Worst Movement (sec/veh) | |
| A | <= 10 | <= 10 | Free Flow / Insignificant Delays |
| B | > 10-20 | > 10-15 | Stable Flow / Minimal Delays |
| C | > 20-35 | >15-25 | Stable Flow / Acceptable Delays |
| D | > 35-55 | >25-35 | Nearing Unstable / Tolerable Delays |
| E | > 55-80 | >35-50 | Unstable Flow / Significant Delays |
| F | > 80 | > 50 | Forced Flow / Excessive Delays |

Where an unsignalized intersection operates at LOS E or F, a volume-to-capacity ratio (V/C) has been reported for the worst-case movement. Where V/C exceeds 1.00, traffic demand during peak periods exceeds the capacity for the movement. This condition will cause queues to

grow, potentially filling auxiliary lanes and blocking adjacent traffic lanes until demand decreases.

### 1.3. Existing Traffic Operations

Existing traffic operations were evaluated using Synchro 10th Edition. The existing traffic models use the March 2020 volumes and the existing roadway geometry. In this scenario, the Steamboat Basecamp has not yet been constructed. The traffic signal splits and cycle lengths were optimized in Synchro. Table 3 shows the existing traffic operations.

Table 3: Existing Delay and LOS

| Intersection | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | Movement | Delay (sec/veh) | LOS (V/C) | Movement | Delay (sec/veh | LOS (V/C) |
| US 40/Elk River Rd (Signal) | - | 30 | C | - | 49.1 | D |
| US 40/Sunlight Dr/Curve CT | WB | 14.7 | B | WB | 29.6 | D |
| Shield Dr/Elk River Rd | SB | 10.8 | B | SB | 12 | B |
| Curve Plaza/Elk River Rd/Access #1 | EB | 11.4 | B | EB | 15.7 | C |
| Shield Dr/Access #2 | SB | 7.5 | A | - | 0 | A |

All of the intersections operate acceptably for the March 2020 conditions. The intersections of US 40 & Elk River Rd and US 40 & Sunlight Dr/Curve CT operate at LOS D in the PM peak, while the remaining intersections operate at LOS C or better. The Synchro result printouts can be found in Appendix C.

## 2. Short Term Background Conditions

### 2.1. Background Volumes

The Short-Term Background Conditions analyzes the existing roadway network, with 2022 traffic volume projections. This scenario assumes that the Steamboat Basecamp has not been built. Traffic volumes in Steamboat Springs are highly seasonal. Traffic counts were collected in March, which is one of the lower volume months. In accordance with City of Steamboat requirements, the existing traffic counts were factored up to reflect conditions typical to the month of July. Using the City's ADT conversion table, the March volumes were factored by 1.59 to convert to the traffic volumes typically experienced in July. The ADT conversion table has been included in the Appendix.

The background growth rate was taken from the CDOT count station #101838 at MP 130.57. The projected 20-year factor is 1.16, yielding an annual growth of 0.75%. The existing counts, after being seasonally adjusted, were then inflated by the 0.75% annual growth in order to generate the 2022 volumes. These volumes can be found in the Appendix.

### 2.2. Short Term Background Traffic Operations

Traffic operations were evaluated using Synchro 10th Edition. Table 4 shows the traffic operations.

Table 4: Short Term Background Delay and LOS

| Intersection | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | Movement | Delay (sec/veh) | LOS (V/C) | Movement | Delay (sec/veh | LOS (V/C) |
| US 40/Elk River Rd (Signal) | - | 51.5 | D | - | 74.8 | E |
| US 40/Sunlight Dr/Curve CT | NBL | 28.6 | D | EB | 628 | F (2.17) |
| Shield Dr/Elk River Rd | SB | 12.9 | B | SB | 15.4 | C |
| Curve Plaza/Elk River Rd/Access #1 | EB | 14.6 | B | EB | 38.3 | E (0.76) |
| Shield Dr/Access #2 | SB | 7.6 | A | - | 0 | A |

Delays have increased at most intersections due to the volume growth. The intersection of US 40 & Sunlight Dr/Curve Ct is expected to operate at LOS F in the PM. This is due to the side street left turn movements having difficulty turning because of the high thru movements along US 40. The West Steamboat Springs US Highway 40 Access Study, conducted by Stolfus and Associates, Inc. states that the intersection of US 40 & Sunlight Dr/Curve CT is to be made right-in, right-out if traffic operations deteriorate. As the projected 2022 volumes are far too low to warrant a signal, movement restrictions at the intersection will likely be the solution should traffic conditions become unacceptable or unsafe.

# 3. Short Term Total Conditions

## 3.1. Trip Generation

The ITE Trip Generation Manual 10th Edition was used to calculate the number of trips generated by the Steamboat Basecamp upon opening year. Only land uses expected to generate external trips were included in the calculations. Amenities intended solely for the residents, such as the hot tub and lobby space, will not attract external visitors, and were not part of the trip generation calculations. Table 5 shows the trip generation calculations for the Steamboat Basecamp.

## Table 5: ITE Trip Generation Calculations

| Multifamily | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITE Code | Units | ITE Land Use | Weekday Rate | Weekday Trips | AM Peak Rate | AM Peak Entering % | AM Peak Exiting % | PM Peak Rate | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 221 | 75 | Multifamily Housing (Mid-Rise) (General Urban/Suburban) | 5.43 | 407 | 0.19 | 26% | 74% | 0.45 | 72% | 28% | 4 | 10 | 24 | 9 |
| | | | | | | | | | | | | | | |
| **Fitness Center** | | | | | | | | | | | | | | |
| ITE Code | Sq. Ft (1000 Ft) | ITE Land Use | Weekday Rate | Weekday Trips | AM Number of People | AM Peak Entering % | AM Peak Exiting % | PM Number of People | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 492 | 4.09 | Health/Fitness Club | - | - | 16 | 51% | 49% | 16 | 57% | 43% | 8 | 8 | 9 | 7 |
| | | | | | | | | | | | | | | |
| **Market** | | | | | | | | | | | | | | |
| ITE Code | Sq. Ft (1000 Ft) | ITE Land Use | Weekday Rate | Weekday Trips | AM Peak Rate | AM Peak Entering % | AM Peak Exiting % | PM Peak Rate | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 851 | 1.00 | Convenience Market | 763.71 | 382 | 62.54 | 50% | 50% | 20.84 | 51% | 49% | 16 | 16 | 5 | 5 |
| 936 | 1.00 | Coffee/Donut Show without Drive-Through | 754.55 | 377 | 101.14 | 51% | 49% | 36.31 | 50% | 50% | 26 | 25 | 9 | 9 |
| - | 0.5 | Kitchen/Storage Space | Not Expected to Generate Trips | | | | | | | | | | | |
| - | 1.16 | Lounge/Lobby Space | Not Expected to Generate Trips | | | | | | | | | | | |

| Phase 1 Total | | | | |
|---|---|---|---|---|
| Weekday Trips | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 1342 | 53 | 59 | 48 | 30 |

The fitness center is unlikely to follow the rates prescribed by the Trip Generation Manual. The fitness center is class-based and has a limit on the number of people using it at any given time, making it unlikely to generate trips at the rate of a typical fitness center. From the information provided about the Steamboat Basecamp amenities, it was assumed that 8 people would enter and exit the fitness center each hour.

The restaurant was broken down into several land uses when calculating the generated trips. The land uses expected to generate external trips were modeled as a 1,000 SF café and a 1,000 SF market. The areas of the restaurant not expected to generate trips are 500 SF of kitchen/storage space and 1,159 SF of lounge/lobby space. The restaurant is expected to serve both residents of the Basecamp, as well as external customers. For the trip generation calculations, it was assumed that 50% of the customers were external trips. The entering and exiting trips shown in the trip generation table for the market and café reflect the 50% of trips that are external to the site.

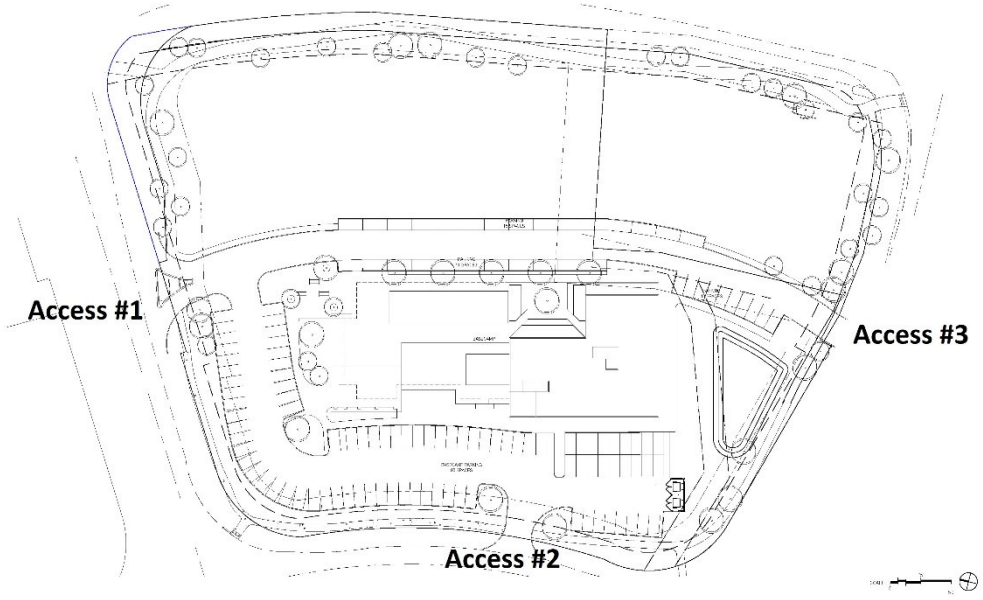
For housing in a general urban/suburban it is assumed that 7% of people will enter/exit the apartments via some form of multimodal transportation, while 8% will do so in the PM. The number of vehicle trips in Table *5* have already been reduced by these percentages, so no further alteration to the vehicle trip numbers was necessary.

### 3.2. Site Access and Circulation Evaluation

Upon completion of the Pilot Building, there will be three access points to the Steamboat Basecamp.

Figure *5* shows the location of the three access points to the Basecamp.

Figure 5: Steamboat Basecamp Access Points




The trips generated by Phase 1 will use the access point which results in the shortest trip. Once out of the Basecamp parking lot, the proportion of trips from the east was determined by the existing turning movements. The distribution of trips to the north and west was determined by traffic counts taken for a study conducted for the West End Plaza, just west of Downhill Dr. The West End Plaza is a good indicator of the Basecamp's trip distribution as they are in similar locations relative to the center of Steamboat. In addition, it was estimated that 5% of the generated vehicles would go to/from the shopping center on Curve Plaza, just west of the Steamboat Basecamp. Another 5% were estimated to travel south on Shield Dr. Figure 6 shows the estimated trip distribution.

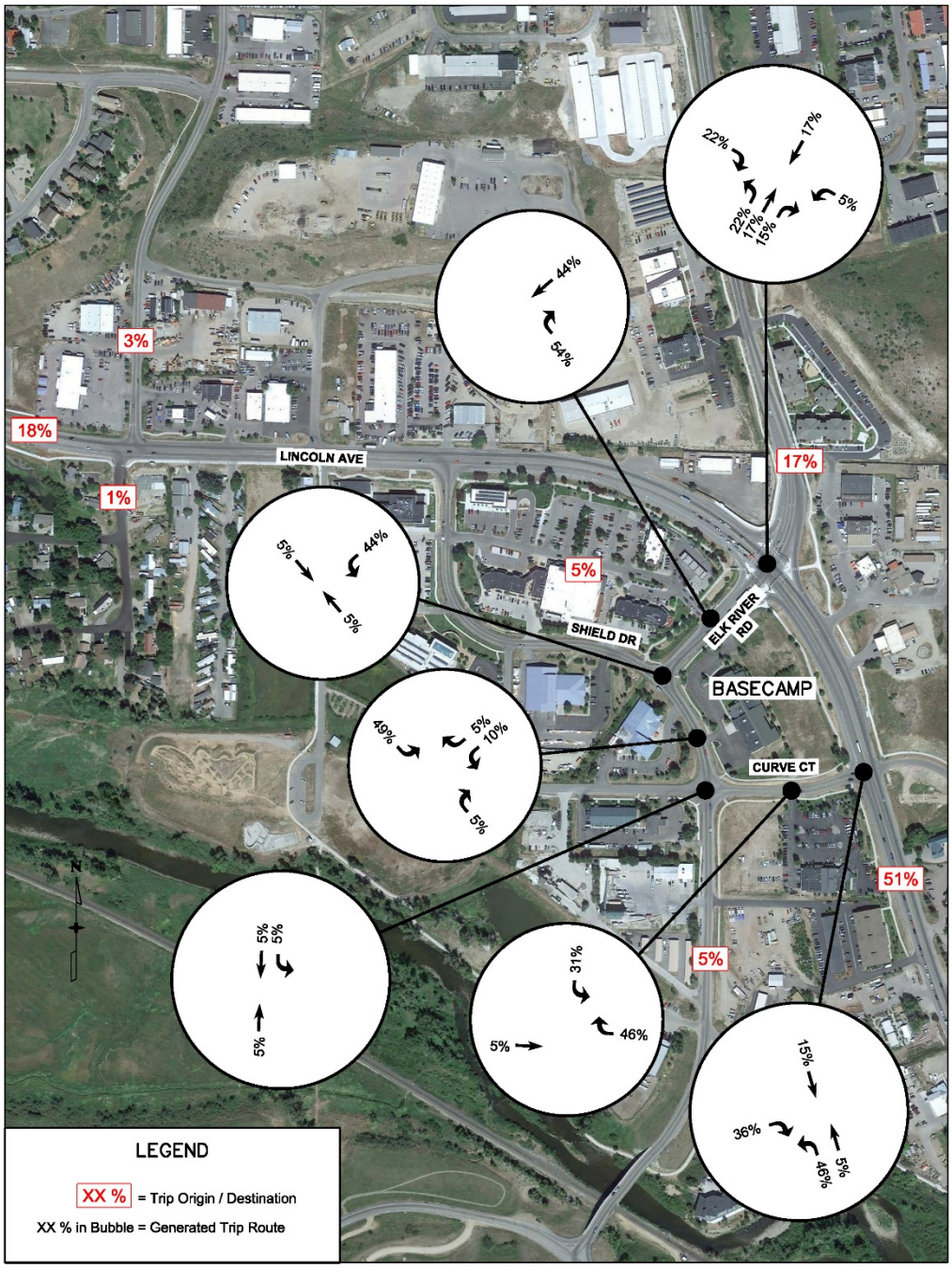



*Figure 6:Trip Distribution*

## 3.3. Auxiliary Lanes

Each turning movement on US 40 was assessed to see if SHAC auxiliary lane requirements are met. Since this portion of US 40 is classified as a Non-Rural Regional Highway (NR-A), a volume greater than 10 vehicles per hour (VPH) warrants a left turn deceleration lane, and a volume greater than 25 VPH warrants a right turn deceleration lane. A right turning movement of 50 VPH from the side street warrants an acceleration lane. Table 6 shows the warranted auxiliary lanes.

Table 6: Warranted Auxiliary Lanes

| Intersection | Movement | 2022 Total Conditions Volume |
|---|---|---|
| US 40 & Downhill Dr/Riverside Dr | WBR | 162 VPH |
| US 40 & Sunlight Dr/Curve CT | SBL | 28 VPH |

As noted previously, the US 40 & Downhill Dr/Riverside Dr intersection is the subject of current study by the City of Steamboat Springs. With respect to the US 40 & Sunlight Dr/Curve Ct intersection, the Steamboat Basecamp project does not contribute any traffic volume to southbound left turn movement.

### 3.4. Short Term Conditions Traffic Operations

Traffic operations were evaluated for the Short-Term Total Conditions scenario using Synchro 10th Edition. This scenario assumes that Phase 1 of the Steamboat Basecamp has been completed. The roadway geometry remains the same as in the previous scenarios. Table 7 shows the delay and LOS for the Total Conditions scenario. The Synchro printouts can be found in Appendix C.

Table 7: Short Term Total Conditions Delay and LOS

| Intersection | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | Movement | Delay (sec/veh) | LOS (V/C) | Movement | Delay (sec/veh) | LOS (V/C) |
| US 40/Elk River Rd (Signal) | - | 51.7 | D | - | 75.0 | E |
| US 40/Sunlight Dr/Curve CT | NBL | 34.3 | D | EB | 1039.7 | F (3.04) |
| Shield Dr/Elk River Rd | SB | 13.7 | B | SB | 16.5 | C |
| Curve Plaza/Elk River Rd/Access #1 | EB | 16.4 | C | EB | 47.7 | E (0.82) |
| | WB | 8.9 | A | WB | 9.6 | A |
| Shield Dr/Access #2 | WB | 12.3 | B | WB | 12 | B |
| Curve Ct/Access #3 | SB | 10.7 | B | SB | 11 | B |

The intersection of Curve Plaza & Elk River Rd was modeled with a RIRO access to the Steamboat Basecamp, and a full movement access for the shopping plaza. The RIRO access provides better traffic operations at the intersection than if both accesses were full movement. As shown in the table, the eastbound movements are the cause of poor LOS at the intersection while the westbound movements from the basecamp are expected to operate at LOS A during both time periods. The entering and exiting movements to the Basecamp are expected to experience little to no delay, with the significant delay coming from the left turns exiting the shopping plaza. Traffic operations at the intersection of US 40 & Elk River Rd are expected to be LOS E in the PM due to the westbound thru movement being over capacity. As in the Background scenario, the eastbound movement from Curve CT onto US 40 has significant delays, and is far over capacity.

## 4. Long Term Background Conditions

### 4.1 Traffic Volumes

The Long-Term Background Conditions analyzes the existing roadway network, with 2040 traffic volume projections. This scenario assumes that the Steamboat Basecamp has not occurred.

Traffic volumes in Steamboat Springs are highly seasonal. Traffic counts were collected in March which is one of the lower volume months. In accordance with City of Steamboat requirements, the existing traffic counts were factored up to reflect conditions typical to the month of July. Using the City's ADT conversion table, the March volumes were factored by 1.59 to convert to the traffic volumes typically experienced in July. The ADT conversion table has been included in the Appendix.

The background growth rate was taken from the CDOT count station #101838 at MP 130.57. The projected 20-year factor is 1.16, yielding an annual growth of 0.75%. The existing counts, after being seasonally adjusted, were then inflated by the 0.75% annual growth in order to generate the 2040 volumes. These volumes can be found in the Appendix.

### 4.2 Long-Term Background Traffic Operations

Traffic operations were evaluated using Synchro 10. Table 8 shows the delay and LOS for the study intersections.

Table 8: Long-Term Background Delay and LOS

| Intersection | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | Movement | Delay (sec/veh) | LOS (V/C) | Movement | Delay (sec/veh) | LOS (V/C) |
| US 40/Elk River Rd (Signal) | - | 59.3 | E | - | 135.2 | F |
| US 40/Sunlight Dr/Curve CT | NBL | 58.4 | F (0.81) | WB | 534.1 | F (1.25) |
| Shield Dr/Elk River Rd | SB | 14.2 | B | SB | 18.0 | C |
| Curve Plaza/Elk River Rd/Access #1 | EB | 16.0 | C | EB | 66.1 | F (0.94) |
| Shield Dr/Access #2 | SB | 7.7 | A | - | 0 | A |

When compared to the year 2022 background conditions, the delays have increased due to the background volume growth. The intersection of US 40 & Sunlight Dr/Curve CT is expected to operate at LOS F, with both the left turns onto and off of Curve CT failing. The signalized intersection of US 40 & Elk River Rd is expected to operate at LOS E in the AM and LOS F in the PM. With the increased volumes along Elk River Rd, the intersection of Curve Plaza & Elk River Rd operates at LOS F in the PM, with the eastbound approach nearing capacity.

## 5. Long-Term Total Conditions

### 5.1 Trip Generation

The Long-Term Total Conditions scenario analyzes the study area assuming that Phase 1 of the Steamboat Basecamp has been completed, and the background traffic volumes have grown to the projected year 2040 levels. The number of trips generated by Phase 1 of the Basecamp remains unchanged from the Short-Term Total Conditions scenario, with the assumed trip generation shown in Table 9.

Table 9: ITE Trip Generation Calculations

| Multifamily | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITE Code | Units | ITE Land Use | Weekday Rate | Weekday Trips | AM Peak Rate | AM Peak Entering % | AM Peak Exiting % | PM Peak Rate | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 221 | 75 | Multifamily Housing (Mid-Rise) (General Urban/Suburban) | 5.43 | 407 | 0.19 | 26% | 74% | 0.45 | 72% | 28% | 4 | 10 | 24 | 9 |
| | | | | | | | | | | | | | | |
| **Fitness Center** | | | | | | | | | | | | | | |
| ITE Code | Sq. Ft (1000 Ft) | ITE Land Use | Weekday Rate | Weekday Trips | AM Number of People | AM Peak Entering % | AM Peak Exiting % | PM Number of People | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 492 | 4.09 | Health/Fitness Club | - | - | 16 | 51% | 49% | 16 | 57% | 43% | 8 | 8 | 9 | 7 |
| | | | | | | | | | | | | | | |
| **Market** | | | | | | | | | | | | | | |
| ITE Code | Sq. Ft (1000 Ft) | ITE Land Use | Weekday Rate | Weekday Trips | AM Peak Rate | AM Peak Entering % | AM Peak Exiting % | PM Peak Rate | PM Peak Entering % | PM Peak Exiting % | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 851 | 1.00 | Convenience Market | 763.71 | 382 | 62.54 | 50% | 50% | 20.84 | 51% | 49% | 16 | 16 | 5 | 5 |
| 936 | 1.00 | Coffee/Donut Show without Drive-Through | 754.55 | 377 | 101.14 | 51% | 49% | 36.31 | 50% | 50% | 26 | 25 | 9 | 9 |
| - | 0.5 | Kitchen/Storage Space | Not Expected to Generate Trips | | | | | | | | | | | |
| - | 1.16 | Lounge/Lobby Space | Not Expected to Generate Trips | | | | | | | | | | | |

| Phase 1 Total | | | | |
|---|---|---|---|---|
| Weekday Trips | AM Peak Trips Entering | AM Peak Trips Exiting | PM Peak Trips Entering | PM Peak Trips Exiting |
| 1342 | 53 | 59 | 48 | 30 |

The trip distribution of the Phase 1 trips will also remain consistent with the Short-Term Total Conditions scenario.

## 5.2 Auxiliary Lanes

Each turning movement on US 40 was assessed to see if SHAC auxiliary lane requirements are met. Since this portion of US 40 is classified as a Non-Rural Regional Highway (NR-A), a volume greater than 10 vehicles per hour (VPH) warrants a left turn deceleration lane, and a volume greater than 25 VPH warrants a right turn deceleration lane. A right turning movement of 50 VPH from the side street warrants an acceleration lane. Table 6 shows the warranted auxiliary lanes which are not already in place.

Table 10: Warranted Auxiliary Lanes

| Intersection | Movement | 2040 Total Conditions Volume |
|---|---|---|
| US 40 & Downhill Dr/Riverside Dr | WBR | 185 VPH |
| US 40 & Sunlight Dr/Curve CT | NBL | 197 VPH |
| | SBL | 32 VPH |

As noted previously, the US 40 & Downhill Dr/Riverside Dr intersection is the subject of current study by the City of Steamboat Springs. With respect to the US 40 & Sunlight Dr/Curve CT intersection, the Steamboat Basecamp project does not contribute any traffic volume to southbound left turn movement. The intersections at the Basecamp access #2 and access #3 do not require auxiliary lanes.

## 5.3 Long-Term Total Conditions Traffic Operations

Traffic operations were evaluated for the Long-Term Total Conditions using Synchro 10. The warranted auxiliary lanes have been included in the Synchro models. Table 11 shows the delay and LOS. The Synchro printouts can be found in the Appendix.

Table 11: Long-Term Total Conditions Delay and LOS

| Intersection | AM | | | PM | | |
|---|---|---|---|---|---|---|
| | Movement | Delay (sec) | LOS (v/c) | Movement | Delay (sec) | LOS (v/c) |
| US 40/Elk River Rd (Signal) | - | 59.9 | E | - | 134.2 | F |
| US 40/Sunlight Dr/Curve CT | NBL | 80.7 | F (0.93) | EB | 1039.7 | F (3.04) |
| US 40/Downhill Dr/Riverside Dr | - | 93.8 | C | - | 34.6 | C |
| Shield Dr/Elk River Rd | SB | 15.5 | C | SB | 19.8 | C |
| Curve Plaza/Elk River Rd/Access #1 | EB | 19.8 | C | EB | 117.9 | F (1.1) |
| | WB | 9.0 | A | WB | 9.8 | A |
| Shield Dr/Access #2 | WB | 13.1 | B | WB | 12.7 | B |
| Curve Ct/Access #3 | SB | 11.0 | B | SB | 11.4 | B |

As in the Short-Term Conditions, the intersection of Curve Plaza/Access #1 & Elk River Rd was modeled with a RIRO access to the Steamboat Basecamp. A splitter island could be used to make Access #1 a RIRO access, and would provide better traffic operations at the intersection than if both accesses were full movement. The right-in and right-out movements for the Basecamp are expected to experience little to no delay, with the significant delay coming from the left turns exiting the shopping plaza on the other side of Elk River Rd. Since the eastbound approach will be over capacity by the year 2040, alternative designs should be considered. One solution is to make the shopping plaza access a RIRO, however, this will result in out of direction travel. Another possibility is a roundabout, allowing full access to both the Steamboat Basecamp and the shopping plaza.

The intersection of US 40 & Elk River Rd fails in the PM, with a comparable delay to the 2040 Baseline Conditions. Much of this problem stems from the westbound direction on US 40 only having one thru lane, putting it over capacity, and is unrelated to the development. Until an additional westbound thru lane is built, it is unlikely that the intersection of US 40 & Elk River Rd will operate effectively during the peak hours of demand. The City of Steamboat has identified capacity issues along US-40 in the “US-40 Highway NEPA Study”, and has proposed that US-40 be made a four-lane highway through the western side of town, which includes the study area. The intersection of US 40 & Elk River Rd will operate acceptably if US-40 is a four-lane highway through the intersection.

## 5.4 US 40 & Sunlight Dr/Curve CT

Traffic operations at US 40 & Sunlight Dr/Curve CT remain problematic for the left turns from Sunlight Dr and Curve Ct to US 40. It should be noted that the trips generated by this project do not contribute to the poor traffic conditions for these movements. The left turns out of Sunlight Dr are expected to experience delays exceeding the acceptable limit with or without the construction of Steamboat Basecamp.

The Synchro results also show the northbound left turn from US 40 onto Curve CT failing in the AM, due to an inability to find sufficient gaps in the southbound thru traffic along US 40. Synchro models a mostly uniform rate of arrival for the southbound movement, resulting in few gaps in traffic for the northbound lefts to make their turn. Since the signal of US 40 & Elk River Rd is only 700 feet upstream, the southbound movement will actually be passing Curve CT in platoons, rather than in a more uniform arrival pattern. The platooning effect will provide larger gaps, allowing a longer opportunity of time for the northbound lefts to turn onto Curve CT. The microsimulation extension of Synchro, SimTraffic, was used to analyze this intersection, as it has the ability to more accurately analyze the platooning effects along US 40. The simulation runs from SimTraffic show the northbound left turn movement having a delay of 37.9 seconds (LOS E). LOS D or better conditions are typically desirable during peak traffic periods; however, LOS E conditions are not uncommon, particularly for unsignalized movements onto and off of side streets.

The West Steamboat Springs US Highway 40 Access Study specifies that the intersection of US 40 & Sunlight Dr/Curve CT may be converted to a RIRO if safety or traffic operational problems occur, or if the intersection of US 40 & Loggers Lane, just to the east, is extended to connect US 40 to Shield Dr. The section of the access control plan in the vicinity of US 40 & Sunlight Dr/Curve CT is shown in Figure 7. Converting the intersection of US 40 & Sunlight Dr/Curve CT to a RIRO would divert all of the northbound lefts to the intersection of US 40 & Elk River Rd, which is expected to already be operating at capacity by year 2040. An alternative long-term strategy may be to make the US 40 & Sunlight Dr/Curve CT intersection a 3/4 movement (left-in, right-in, right-out) in order to minimize impacts to the Elk River Rd intersection.

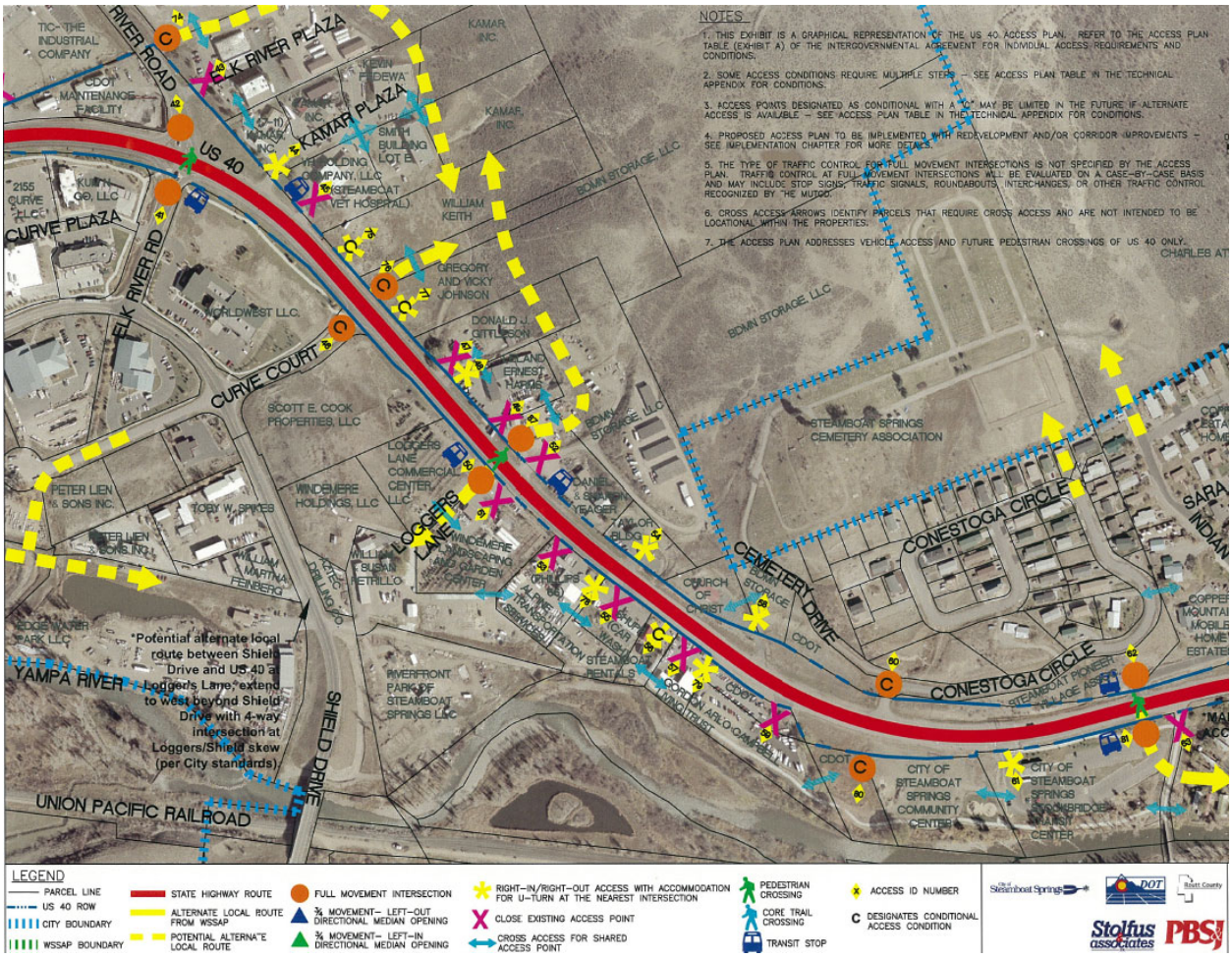



Figure 7: US Highway 40 Access Control Plan

## 5.5 Queuing

Since the intersections of US 40 & Elk River Rd and Curve Plaza & Elk River Rd are spaced only 210 feet apart, the queueing between the two intersections was analyzed to ensure that neither intersection would be blocked. The northbound left turn moment at the signal of US 40 & Elk River Rd has a projected 95% queue of 180 feet. This puts the back of the queue only 30 feet away from extending into the intersection of Curve Plaza & Elk River Rd. Signage warning drivers not to block the intersection should be installed at the intersection of Curve Plaza & Elk River Rd if queues become problematic in the future. This will reduce the chances of the northbound queue from US 40 & Elk River Rd blocking drivers turning onto and off of Elk River Rd.

## 6. Site Contribution

In Colorado, all accesses to the state highway are regulated by the Colorado Department of Transportation (CDOT). Colorado's state highway system constitutes a valuable resource and a major public and private investment. It is the purpose of the SHAC to provide procedures and standards to aid in the management of that investment, to protect the public health, safety, and welfare, to maintain smooth traffic flow, and to protect the functional level of state highways while considering state, regional, and local transportation needs and interests. CDOT requires an access permit to be submitted if the traffic of a facility or operation exceeds 20% of the existing permitted traffic volumes at the access onto a state highway. The year 2022 volumes were used to determine the site contribution. The Steamboat Basecamp is expected to increase the existing traffic volumes by 24% at the access of US 40 & Sunlight Dr/Curve CT, and by 11% at the intersection of US 40 & Elk River Rd. Since the volumes accessing Curve CT are expected to increase by over 20%, an access permit will be required for that intersection.

There are future plans to improve the intersection of US 40 & Downhill Dr/Riverside Dr. Since the development of Steamboat Basecamp will contribute trips to this intersection, the developer will be required to contribute a determined percentage to the cost of intersection improvements. The percent contribution for intersection improvements at US 40 & Downhill Dr/Riverside Dr is determined by the percent of the total traffic volumes entering the intersection that is made up of trips going to or from the Steamboat Basecamp. The higher percentage between the AM and PM peak hours will be used to determine the contribution percentage. From the trip distribution assumptions, there will be 26 site trips entering the intersection in the AM, and 17 trips entering in the PM. The AM site trips account for 1.26% of the total entering trips, meaning that the Steamboat Basecamp is responsible for 1.26% of the intersection improvement costs.

## 7. Alternate Modes of Transportation

The City of Steamboat Springs has several multimodal options, including bus lines, bike lanes, and bike/walking paths. The Red Line and Blue Line both stop at the Elk River Crossing bus stop, just east of Steamboat Basecamp on Elk River Rd. Each of these bus lines have routes that go into downtown Steamboat Ski Resort. The Red Line and Blue Line stop at Elk River Crossing every 20 minutes from 6:35 AM to 11:45 PM.

The Yampa River Core Trail passes just south of the Steamboat Basecamp, intersecting with Shield Dr, and extending through downtown Steamboat. Cyclists looking to ride from the Steamboat Basecamp into downtown Steamboat will most likely take this trail. Many of the roads in downtown Steamboat have bike lanes making it easy for cyclists to exit the Yampa River Core Trail and use the roadway network to reach their destination.

## Findings and Recommendations

The traffic impact study conducted for the Steamboat Basecamp in Steamboat Springs has concluded that the traffic volumes generated by the facility can be accommodated by the surrounding roadway system. The following is a summary of the study's findings:

1. A state highway access permit is required for the access at the intersection of US 40 & Sunlight Dr/Curve CT. In addition, both a southbound and northbound left turn lane should be added. Both of these turn lanes can be added by restriping the two-way left-turn median.

2. The Steamboat Basecamp is not responsible for failing traffic operations at the intersection of US 40 & Elk River Rd. For this intersection to operate well during peak hours in year 2040, and consistent with current long-range plans, a second westbound thru lane will need to be constructed.

3. The Steamboat Basecamp is not responsible for failing traffic operations at the intersection of Sunlight Dr/Curve CT. In order to operate acceptably in the long term, the intersection could be made a ¾ movement (left-in, right-in, right-out).

4. The Steamboat Basecamp contributes 1.26% of the traffic volume at the intersection of US 40 & Downhill Dr/Riverside Dr in the AM peak hour.

5. Signage warning drivers not to block the intersection should be installed at the intersection of Access #1 & Elk River Rd if queues become problematic in the future.

6. Access #1 to the Basecamp should be made right-in, right-out to help accommodate increased future traffic volumes. A splitter island and accompanying signage could be used to restrict the movements.

# Appendix A

## Scope Approval Form

# Attachment A
# TRAFFIC IMPACT STUDY – SCOPE APPROVAL FORM

Prior to starting a traffic impact study, a Scope Approval Form must be submitted for review and signed by the City Public Works Director. It shall be included in every traffic study submittal as Attachment A. This Scope Approval Form is for City requirements only. Consultants must contact CDOT to determine requirements related to access permits and work in CDOT right-of-way.

## Project Information

| | |
|---|---|
| Project Name: | Steamboat Basecamp (Phase 1) |
| Project Location: | East of Shield Drive between Elk River Road and Curve Court (Former site of the Steamboat Pilot) |
| Developer Name/ Contact Number: | Kevin Riegler<br>May Riegler Properties<br>(202) 369-5820 |
| Traffic Engineer Name/ Contact Number: | Max Rusch, PE<br>Stolfus & Associates, Inc.<br>(303) 221-2330; max@stolfusandassociates.com |

## Study Parameters

Type of Study Required: ☐ Trip Generation Letter ☒ Long-term Traffic Study ☐ Short-term Traffic Study ☐ Trip Evaluation Letter

Traffic Counts

☐ Winter Zone ☒ Summer Zone

☒ Counts w/in last 2 years are available

☐ New counts will be collected on _____

☐ Existing counts will be estimated based on:

☒ Future counts will be estimated based on a _____% growth rate. A 1.16 20-year factor (0.75% per year) from OTIS Count Station #101838

Peak Hours Analyzed

☒ AM Peak Hour ☒ PM peak hour ☐ Other _____

Trip Generation Rates

☒ From ITE ☐ Other (cite)_____

☐ No passby or mode split (typical)

☒ Passby or mode split (describe) The suitability of these adjustments will be consistent with the Trip Generation, 10th Edition Supplement and potentially other sources, subject to City and CDOT approval.

Trip Distribution – Attach sketch A-1

## Study Parameters

List of Study Area Intersections

| | | |
|---|---|---|
| 1. | Lincoln Avenue & | Elk River Road |
| 2. | Lincoln Avenue & | Curve Court |
| 3. | Elk River Road & | Curve Plaza / Site Access #1 |
| 4. | Elk River Road & | Shield Drive |
| 5. | Shield Drive & | Site Access #2 |
| 6. | Curve Court & | Site Access #3 |
| 7. | | |

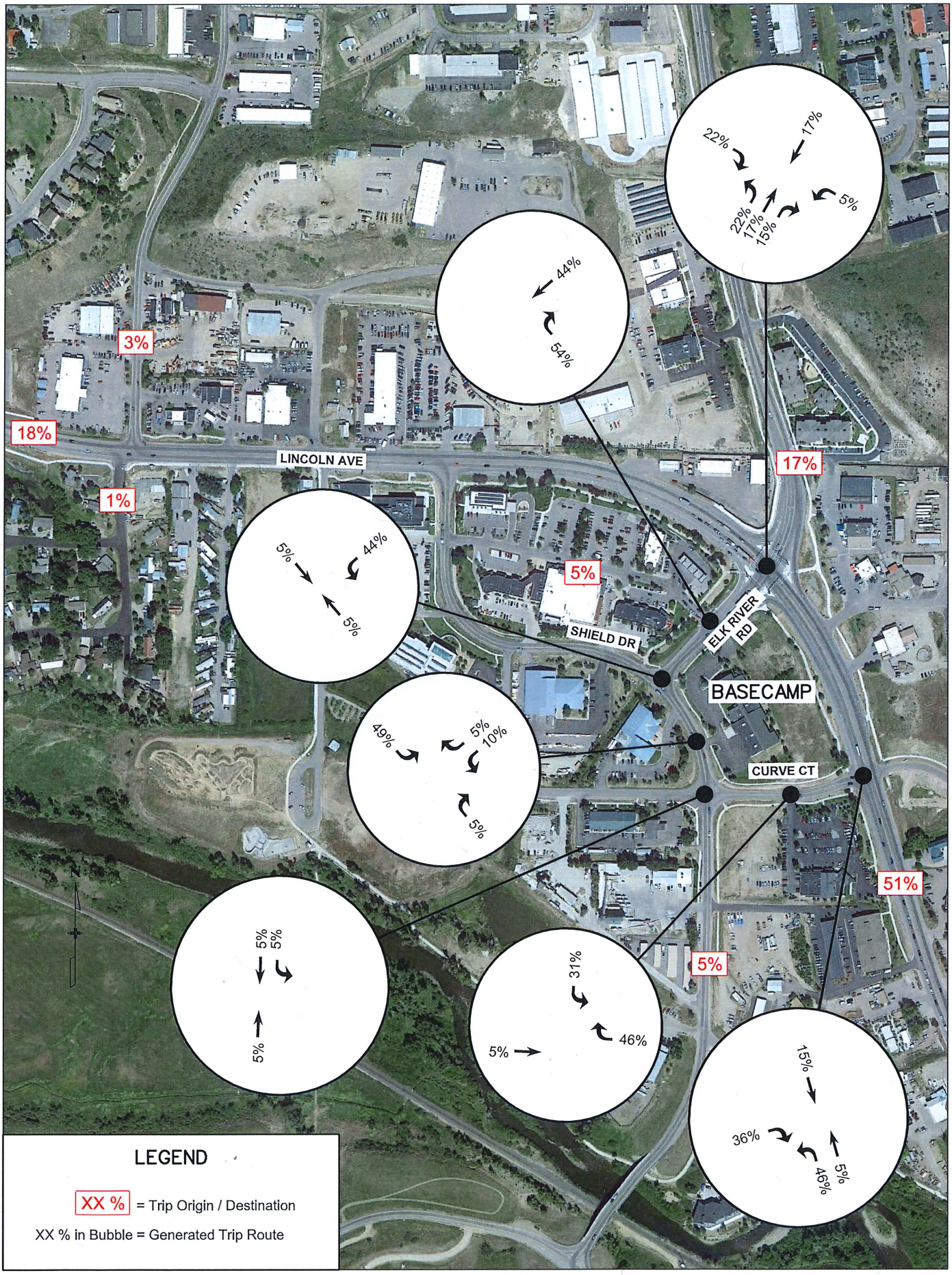
Key Analysis items

- [X] Existing + site traffic at study intersections
- [X] Peak Hour LOS at study intersections
- [X] % Site contribution to signal at Lincoln Ave & Downhill Drive
- [X] Auxiliary lane evaluation at Lincoln Ave & Curve Court, Shield Drive & all Site Accesses
- [ ] Traffic signal warrants at _____
- [ ] Four-way stop sign warrants at _____
- [X] Queuing Analysis at Lincoln Ave & Elk River Road
- [X] Other Evaluate need for CDOT permitting

## Approvals

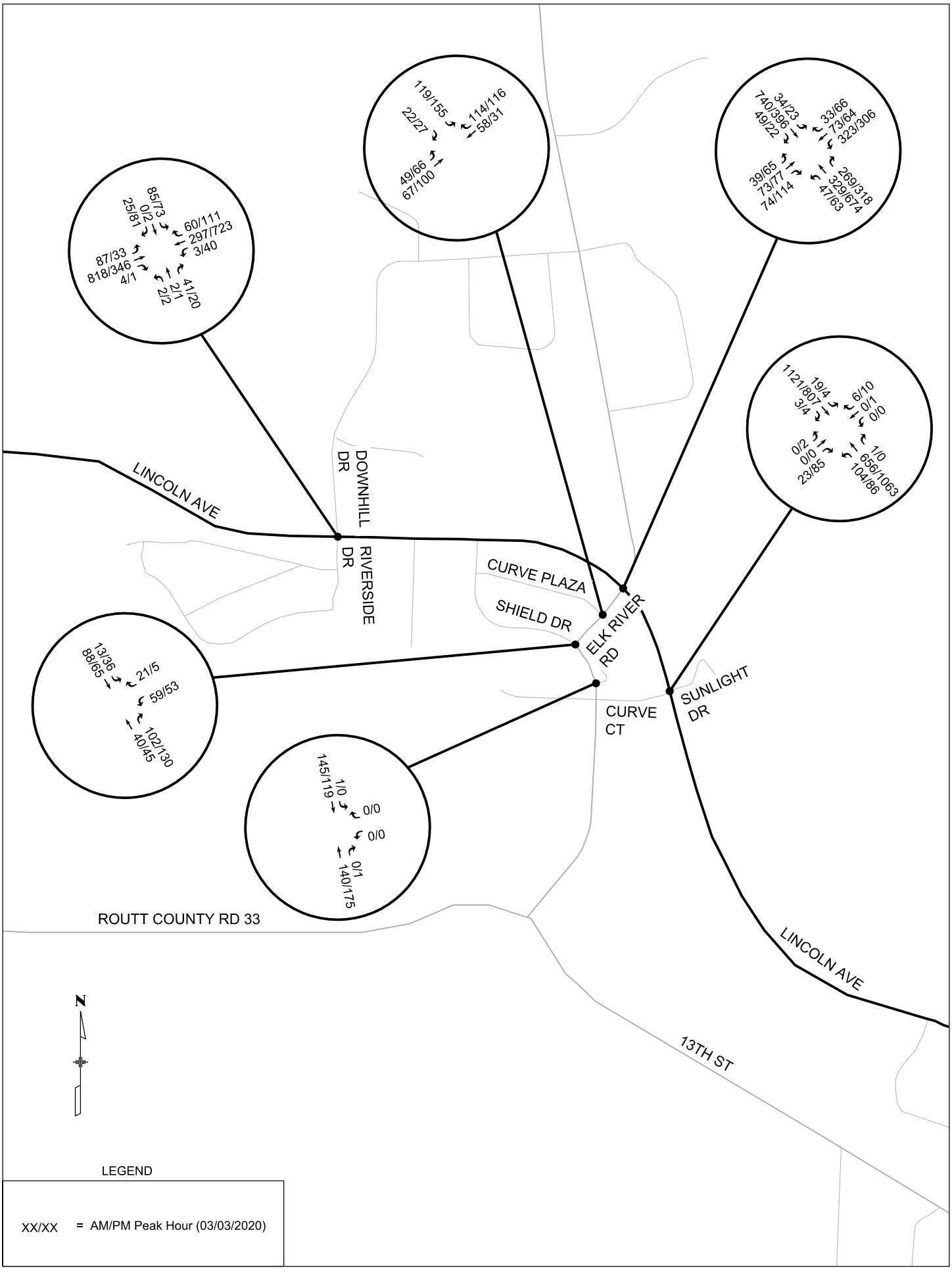
| Max Rusch | 4/12/2021 | 303-221-2330 |
|---|---|---|
| Prepared By: | Date | Phone |
| Grant King for | 4/27/21 | |
| Ben Beall<br>City Engineer | Date | Phone |

Please note that the approval of this scope approval form shall not be construed as an approval of the proposed use, but rather a methodology for evaluation of the proposed use. During the city development review process, the proposed use will be reviewed by city staff for compliance with code, standards, and community planning documents.

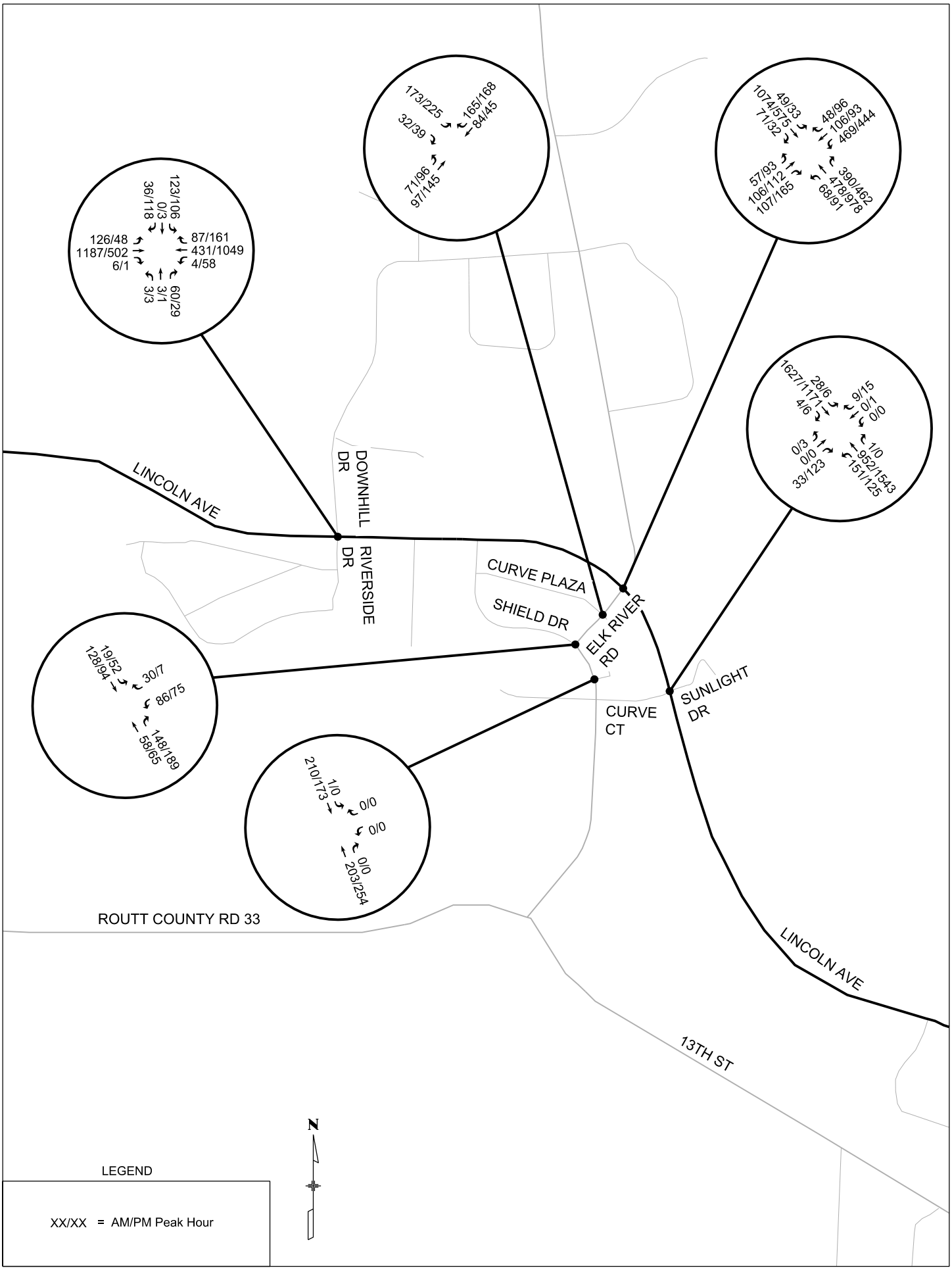

3%
18%
1%
LINCOLN AVE
17%
5%
SHIELD DR
ELK RIVER RD
BASECAMP
CURVE CT
51%
5%
22%
17%
5%
22%
17%
15%
44%
54%
5%
44%
5%
5%
49%
5%
10%
5%
5%
5%
5%
31%
46%
5%
15%
36%
5%
46%
N
LEGEND
XX % = Trip Origin / Destination
XX % in Bubble = Generated Trip Route

# Appendix B

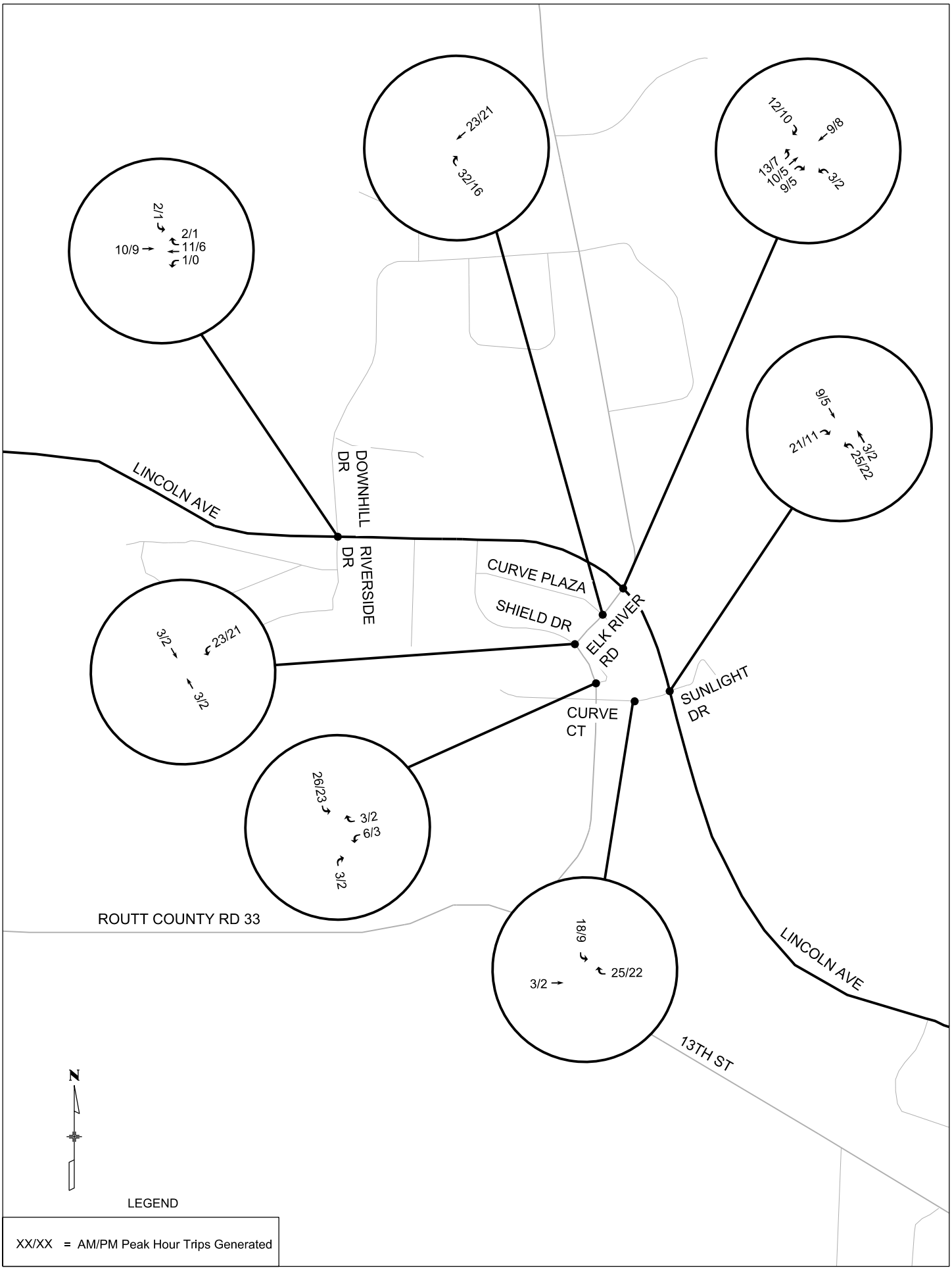
Volume Sheets
Traffic Count Data



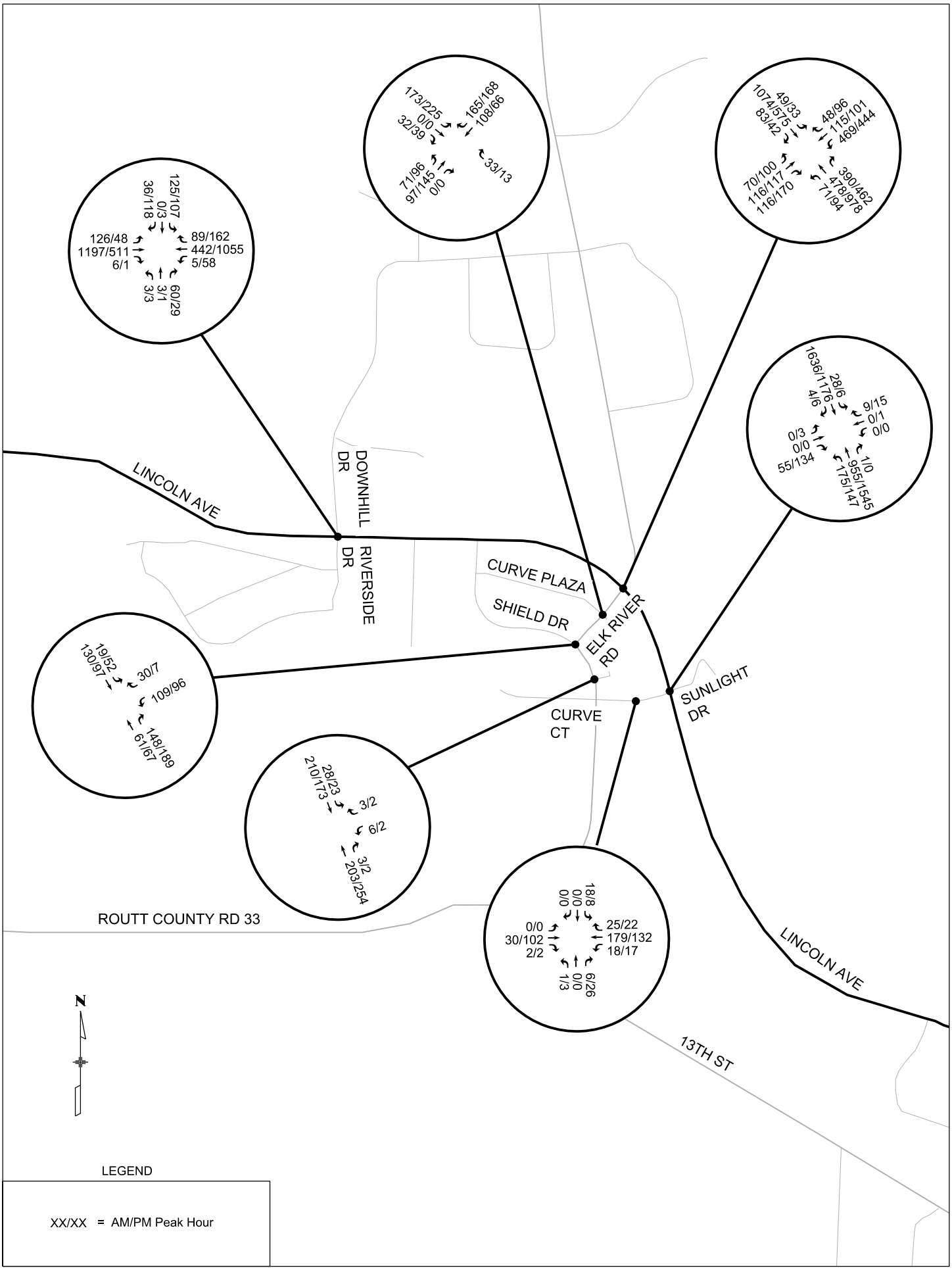

Existing Traffic Volumes



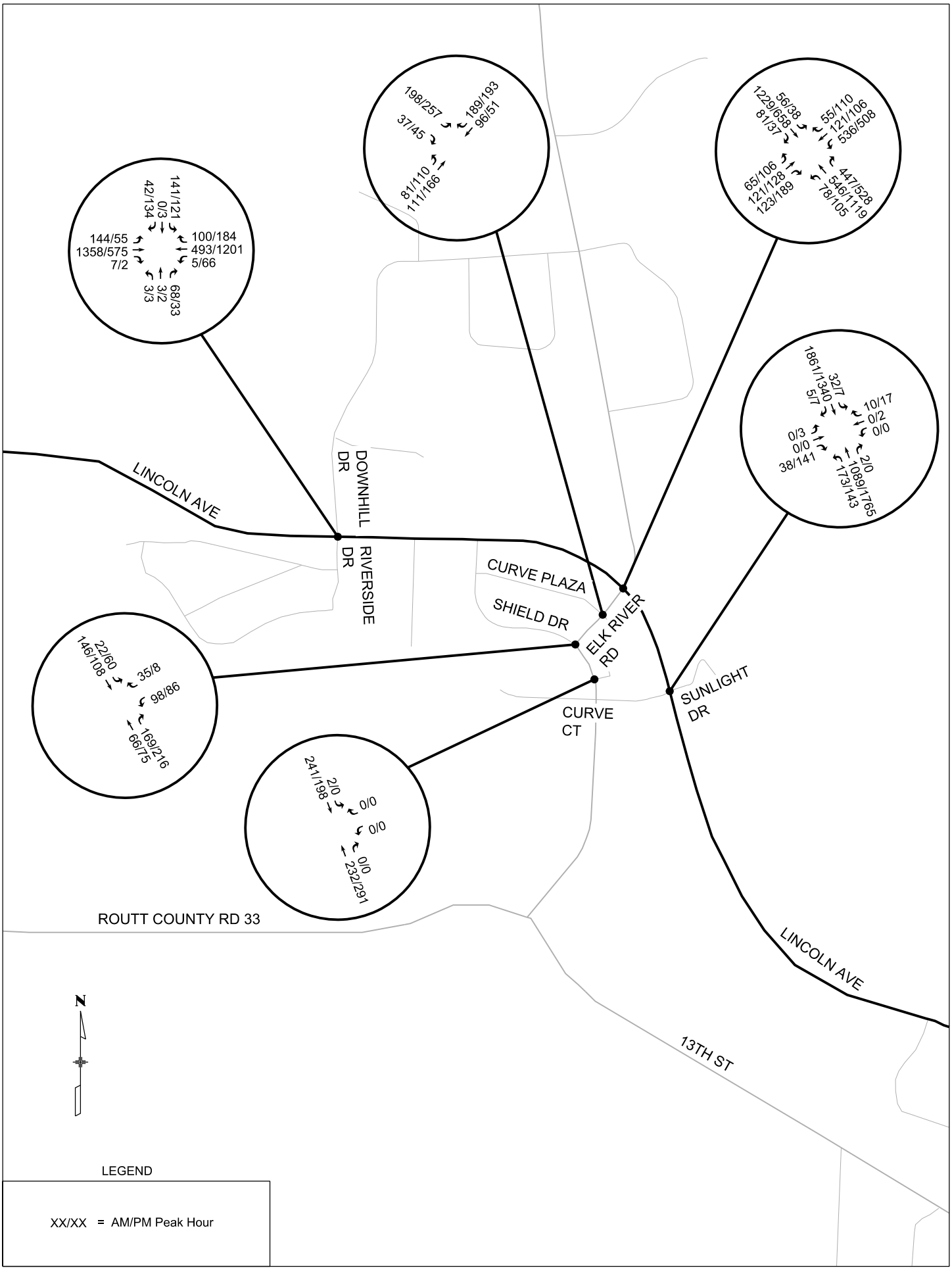

SHORT TERM BACKGROUND CONDITIONS (JULY 2022)



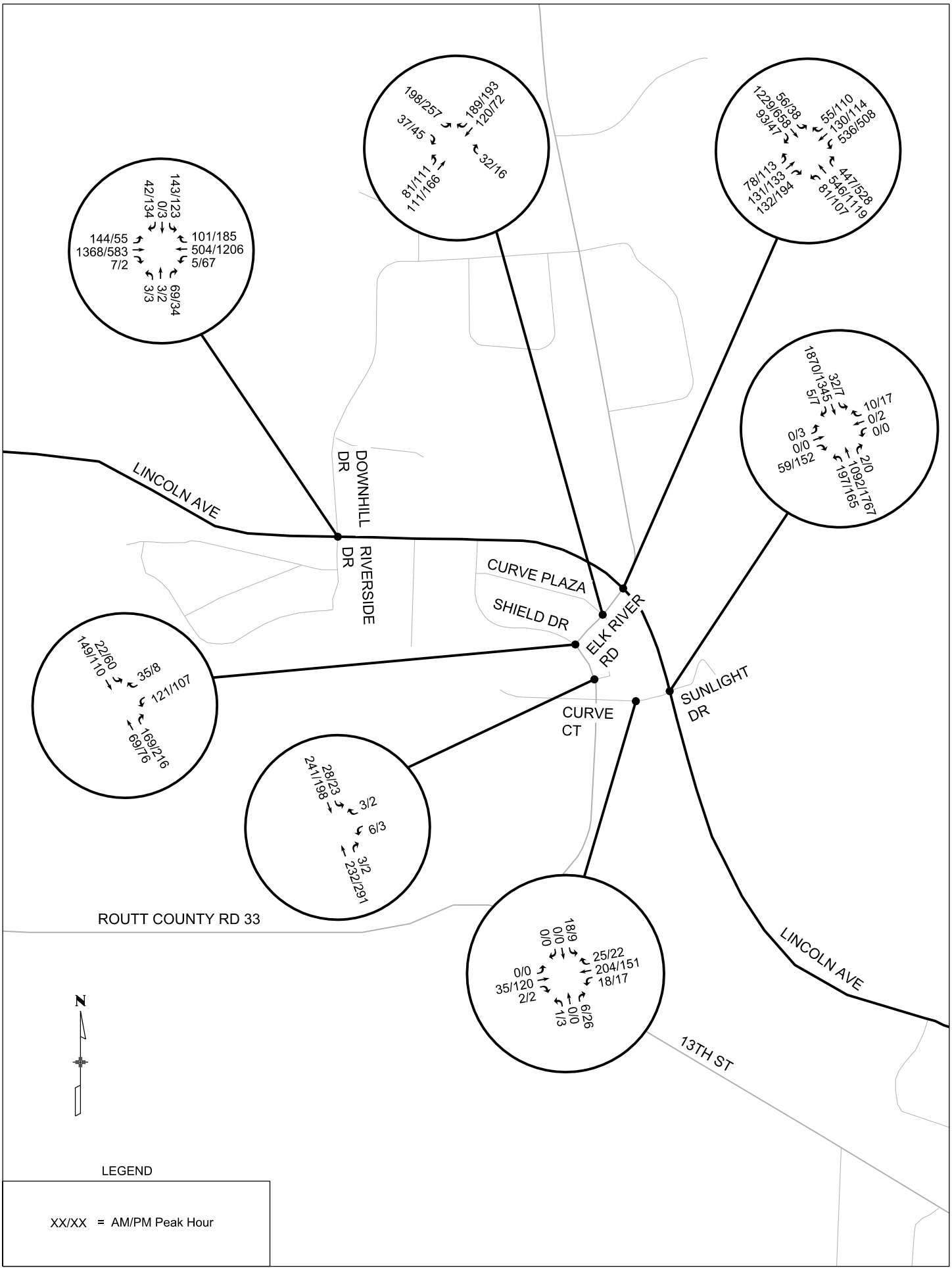

TRIPS GENERATED FROM STEAMBOAT BASECAMP PHASE 1




SHORT TERM TOTAL CONDITIONS (JULY 2022)



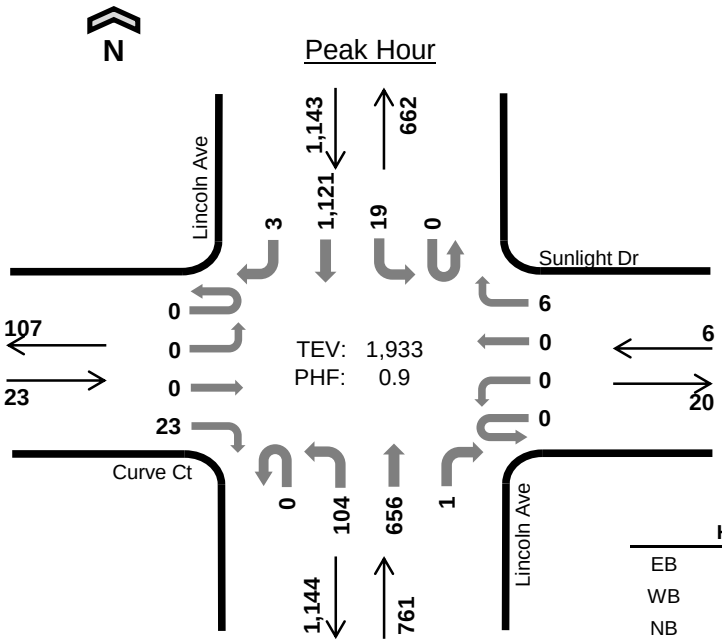

LONG TERM BACKGROUND CONDITIONS (JULY 2040)

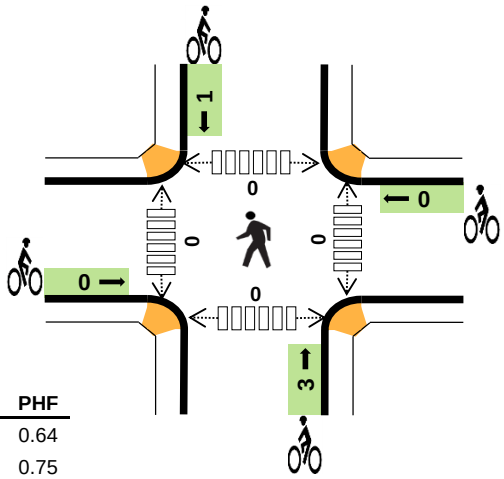



LONG TERM TOTAL CONDITIONS (JULY 2040)

# Lincoln Ave
# Curve Ct

**Date:** Tue, Mar 03, 2020
**Count Period:** 7:00 AM to 9:00 AM
**Peak Hour:** 7:30 AM to 8:30 AM




| | HV %: | PHF |
|---|---|---|
| EB | 0.0% | 0.64 |
| WB | 0.0% | 0.75 |
| NB | 4.3% | 0.80 |
| SB | 3.3% | 0.91 |
| TOTAL | 3.7% | 0.90 |

## Two-Hour Count Summaries

| Interval Start | Curve Ct Eastbound | | | | Sunlight Dr Westbound | | | | Lincoln Ave Northbound | | | | Lincoln Ave Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 11 | 59 | 0 | 0 | 2 | 188 | 0 | 268 | 0 |
| 7:15 AM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 13 | 110 | 0 | 0 | 4 | 188 | 1 | 321 | 0 |
| **7:30 AM** | **0** | **0** | **0** | **5** | **0** | **0** | **0** | **2** | **0** | **16** | **103** | **0** | **0** | **3** | **300** | **0** | **429** | 0 |
| **7:45 AM** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **0** | **0** | **22** | **180** | **1** | **0** | **7** | **304** | **2** | **518** | 1,536 |
| **8:00 AM** | **0** | **0** | **0** | **9** | **0** | **0** | **0** | **2** | **0** | **35** | **204** | **0** | **0** | **5** | **283** | **0** | **538** | 1,806 |
| **8:15 AM** | **0** | **0** | **0** | **7** | **0** | **0** | **0** | **2** | **0** | **31** | **169** | **0** | **0** | **4** | **234** | **1** | **448** | **1,933** |
| 8:30 AM | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 1 | 0 | 24 | 125 | 0 | 0 | 1 | 191 | 2 | 355 | 1,859 |
| 8:45 AM | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 26 | 127 | 2 | 0 | 4 | 230 | 1 | 401 | 1,742 |
| Count Total | 0 | 1 | 0 | 56 | 0 | 1 | 0 | 7 | 0 | 178 | 1,077 | 3 | 0 | 30 | 1,918 | 7 | 3,278 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **23** | **0** | **0** | **0** | **6** | **0** | **104** | **656** | **1** | **0** | **19** | **1,121** | **3** | **1,933** | **0** |

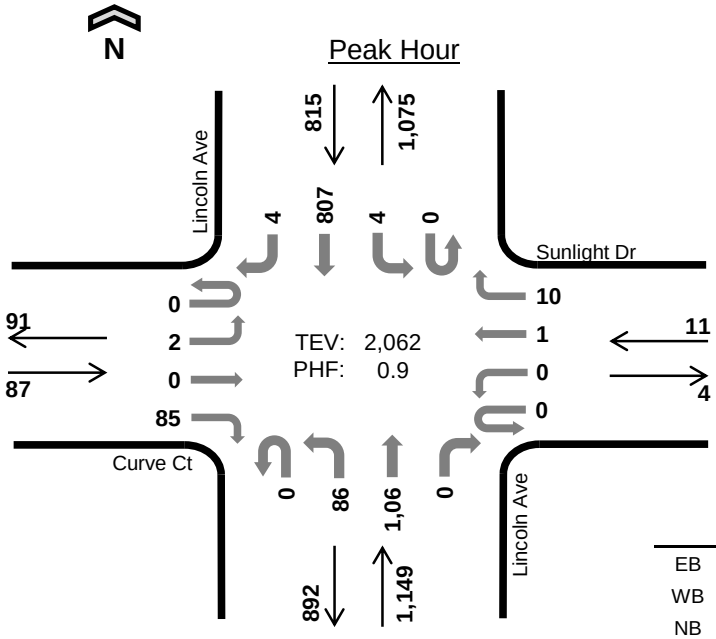
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

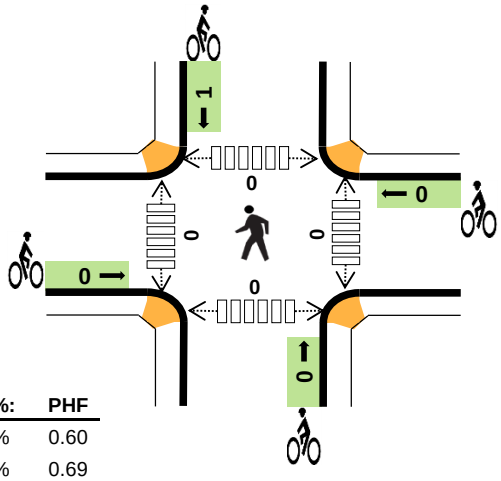
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 3 | 0 | 3 | 2 | *8* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:15 AM | 4 | 0 | 6 | 7 | *17* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **7:30 AM** | **0** | **0** | **3** | **13** | ***16*** | **0** | **0** | **0** | **1** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **7:45 AM** | **0** | **0** | **1** | **11** | ***12*** | **0** | **0** | **2** | **0** | ***2*** | **0** | **0** | **0** | **0** | *0* |
| **8:00 AM** | **0** | **0** | **14** | **8** | ***22*** | **0** | **0** | **1** | **0** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **8:15 AM** | **0** | **0** | **15** | **6** | ***21*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 8:30 AM | 0 | 0 | 7 | 10 | *17* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:45 AM | 1 | 0 | 4 | 10 | *15* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 8 | 0 | 53 | 67 | *128* | 0 | 0 | 3 | 1 | *4* | 0 | 0 | 0 | 0 | *0* |
| **Peak Hour** | **0** | **0** | **33** | **38** | ***71*** | **0** | **0** | **3** | **1** | ***4*** | **0** | **0** | **0** | **0** | ***0*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Lincoln Ave
# Curve Ct

**Date:** Tue, Mar 03, 2020
**Count Period:** 4:00 PM to 6:00 PM
**Peak Hour:** 4:45 PM to 5:45 PM




| | HV %: | PHF |
|---|---|---|
| EB | 0.0% | 0.60 |
| WB | 0.0% | 0.69 |
| NB | 3.6% | 0.94 |
| SB | 3.2% | 0.88 |
| TOTAL | 3.2% | 0.90 |

## Two-Hour Count Summaries

| Interval Start | Curve Ct Eastbound | | | | Sunlight Dr Westbound | | | | Lincoln Ave Northbound | | | | Lincoln Ave Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 1 | 0 | 32 | 0 | 0 | 1 | 4 | 1 | 42 | 240 | 1 | 0 | 1 | 213 | 2 | 538 | 0 |
| 4:15 PM | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 2 | 0 | 24 | 237 | 0 | 0 | 2 | 206 | 0 | 492 | 0 |
| 4:30 PM | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 3 | 0 | 22 | 205 | 1 | 0 | 0 | 166 | 1 | 411 | 0 |
| **4:45 PM** | **0** | **0** | **0** | **15** | **0** | **0** | **0** | **3** | **0** | **32** | **247** | **0** | **0** | **1** | **193** | **1** | **492** | 1,933 |
| **5:00 PM** | **0** | **0** | **0** | **36** | **0** | **0** | **0** | **2** | **0** | **25** | **279** | **0** | **0** | **2** | **229** | **1** | **574** | 1,969 |
| **5:15 PM** | **0** | **1** | **0** | **14** | **0** | **0** | **1** | **3** | **0** | **15** | **270** | **0** | **0** | **1** | **204** | **1** | **510** | 1,987 |
| **5:30 PM** | **0** | **1** | **0** | **20** | **0** | **0** | **0** | **2** | **0** | **14** | **267** | **0** | **0** | **0** | **181** | **1** | **486** | **2,062** |
| 5:45 PM | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 2 | 0 | 14 | 212 | 0 | 0 | 2 | 192 | 0 | 435 | 2,005 |
| Count Total | 0 | 4 | 2 | 160 | 0 | 0 | 3 | 21 | 1 | 188 | 1,957 | 2 | 0 | 9 | 1,584 | 7 | 3,938 | 0 |
| **Peak Hour** | **0** | **2** | **0** | **85** | **0** | **0** | **1** | **10** | **0** | **86** | **1,063** | **0** | **0** | **4** | **807** | **4** | **2,062** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 0 | 14 | 5 | *19* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 4:15 PM | 0 | 0 | 8 | 9 | *17* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 4:30 PM | 0 | 0 | 8 | 6 | *14* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **4:45 PM** | **0** | **0** | **13** | **8** | ***21*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **5:00 PM** | **0** | **0** | **9** | **4** | ***13*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **5:15 PM** | **0** | **0** | **14** | **8** | ***22*** | **0** | **0** | **0** | **1** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **5:30 PM** | **0** | **0** | **5** | **6** | ***11*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 5:45 PM | 0 | 0 | 4 | 5 | *9* | 0 | 0 | 0 | 1 | *1* | 0 | 2 | 0 | 0 | *2* |
| Count Total | 0 | 0 | 75 | 51 | *126* | 0 | 0 | 0 | 2 | *2* | 0 | 2 | 0 | 0 | *2* |
| **Peak Hour** | **0** | **0** | **41** | **26** | ***67*** | **0** | **0** | **0** | **1** | ***1*** | **0** | **0** | **0** | **0** | ***0*** |

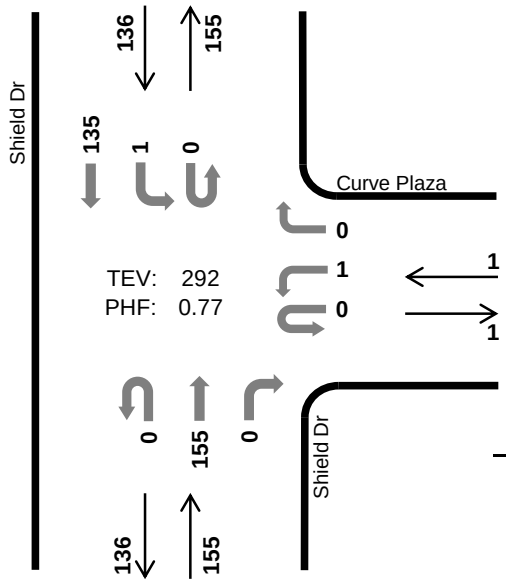
**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Shield Dr
# Curve Plaza

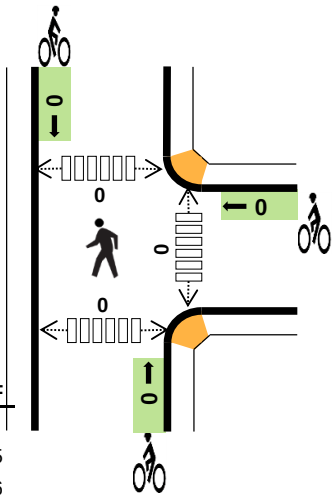
**Date: Tue, Mar 03, 2020**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:45 AM to 8:45 AM**

N

Peak Hour




| | HV %: | PHF |
|---|---|---|
| EB | - | - |
| WB | 0.0% | 0.25 |
| NB | 11.0% | 0.86 |
| SB | 1.5% | 0.58 |
| TOTAL | 6.5% | 0.77 |




## Two-Hour Count Summaries

| Interval Start | 0 | | | | Curve Plaza | | | | Shield Dr | | | | Shield Dr | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 16 | 0 | 40 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 17 | 0 | 38 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 35 | 0 | 65 | 0 |
| **7:45 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **36** | **0** | **0** | **0** | **59** | **0** | **95** | 238 |
| **8:00 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **37** | **0** | **0** | **1** | **30** | **0** | **68** | 266 |
| **8:15 AM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **37** | **0** | **0** | **0** | **21** | **0** | **58** | 286 |
| **8:30 AM** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **45** | **0** | **0** | **0** | **25** | **0** | **71** | **292** |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 29 | 0 | 62 | 259 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 263 | 0 | 0 | 1 | 232 | 0 | 497 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **155** | **0** | **0** | **1** | **135** | **0** | **292** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 0 | 0 | 3 | 3 | *6* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:15 AM | 0 | 0 | 4 | 2 | *6* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:30 AM | 0 | 0 | 6 | 1 | *7* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **7:45 AM** | **0** | **0** | **6** | **0** | ***6*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:00 AM** | **0** | **0** | **2** | **1** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:15 AM** | **0** | **0** | **5** | **0** | ***5*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:30 AM** | **0** | **0** | **4** | **1** | ***5*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 8:45 AM | 0 | 0 | 4 | 1 | *5* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 0 | 0 | 34 | 9 | *43* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **Peak Hr** | **0** | **0** | **17** | **2** | ***19*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |

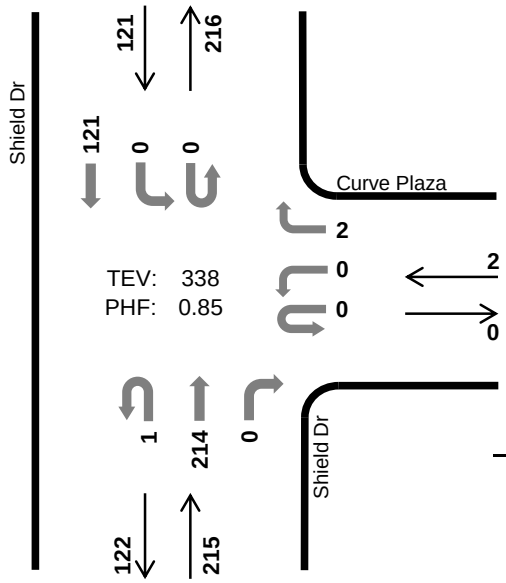
**Mark Skaggs**: (425) 250-0777 mark.skaggs@idaxdata.com

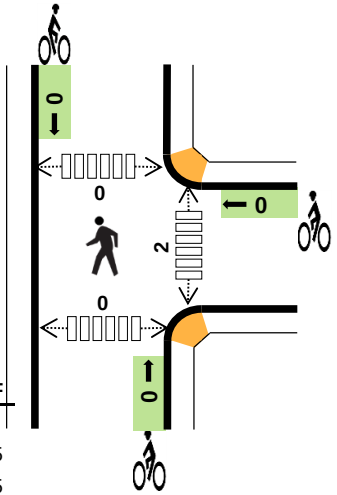
# Shield Dr
# Curve Plaza

**Date: Tue, Mar 03, 2020**
**Count Period: 4:00 PM to 6:00 PM**
**Peak Hour: 4:00 PM to 5:00 PM**

N

Peak Hour




| | HV %: | PHF |
|---|---|---|
| EB | - | - |
| WB | 0.0% | 0.25 |
| NB | 4.7% | 0.85 |
| SB | 5.8% | 0.82 |
| TOTAL | 5.0% | 0.85 |

## Two-Hour Count Summaries

| Interval Start | 0 | | | | Curve Plaza | | | | Shield Dr | | | | Shield Dr | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| **4:00 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **0** | **0** | **63** | **0** | **0** | **0** | **35** | **0** | **100** | 0 |
| **4:15 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **52** | **0** | **0** | **0** | **37** | **0** | **89** | 0 |
| **4:30 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **50** | **0** | **0** | **0** | **21** | **0** | **71** | 0 |
| **4:45 PM** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **49** | **0** | **0** | **0** | **28** | **0** | **78** | **338** |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 40 | 0 | 96 | 334 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 30 | 0 | 70 | 315 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 21 | 0 | 51 | 295 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 16 | 0 | 40 | 257 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 364 | 0 | 0 | 0 | 228 | 0 | 595 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **1** | **0** | **214** | **0** | **0** | **0** | **121** | **0** | **338** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

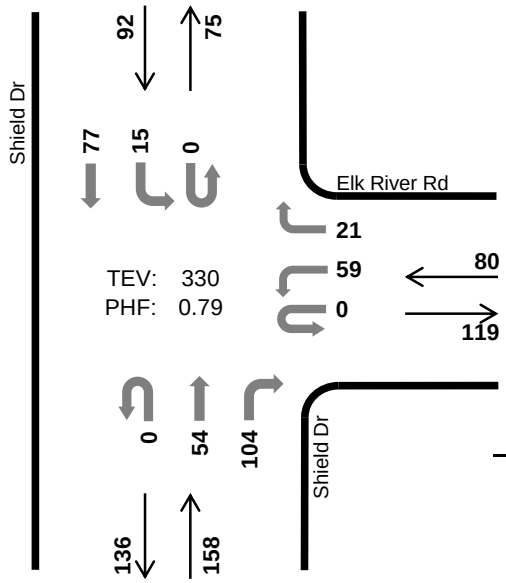
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| **4:00 PM** | **0** | **0** | **3** | **0** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **0** | **0** | *1* |
| **4:15 PM** | **0** | **0** | **4** | **5** | ***9*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **0** | **0** | *1* |
| **4:30 PM** | **0** | **0** | **1** | **2** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **4:45 PM** | **0** | **0** | **2** | **0** | ***2*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **1** | **0** | **0** | ***2*** |
| 5:00 PM | 0 | 0 | 1 | 1 | *2* | 0 | 0 | 0 | 1 | *1* | 1 | 0 | 0 | 1 | *2* |
| 5:15 PM | 0 | 0 | 3 | 0 | *3* | 0 | 0 | 0 | 0 | *0* | 2 | 0 | 0 | 2 | *4* |
| 5:30 PM | 0 | 0 | 1 | 0 | *1* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 0 | 0 | *1* |
| 5:45 PM | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* | 2 | 0 | 0 | 0 | *2* |
| Count Total | 0 | 0 | 15 | 8 | *23* | 0 | 0 | 0 | 1 | *1* | 8 | 3 | 0 | 3 | *14* |
| **Peak Hr** | **0** | **0** | **10** | **7** | ***17*** | **0** | **0** | **0** | **0** | ***0*** | **2** | **3** | **0** | **0** | ***5*** |

**Mark Skaggs**: (425) 250-0777 mark.skaggs@idaxdata.com

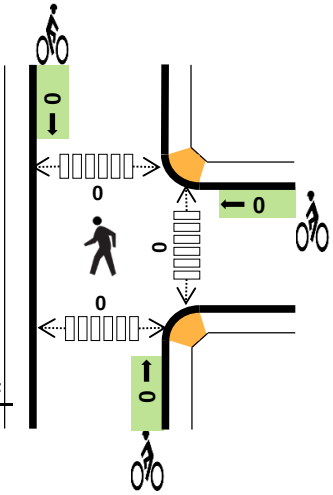
# Shield Dr
# Elk River Rd

N

Peak Hour




**Date: Tue, Mar 03, 2020**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:45 AM to 8:45 AM**




| | HV %: | PHF |
|---|---|---|
| EB | - | - |
| WB | 2.5% | 0.77 |
| NB | 10.8% | 0.86 |
| SB | 0.0% | 0.49 |
| TOTAL | 5.8% | 0.79 |

## Two-Hour Count Summaries

| Interval Start | 0 | | | | Elk River Rd | | | | Shield Dr | | | | Shield Dr | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 8 | 16 | 0 | 0 | 10 | 0 | 43 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 4 | 0 | 0 | 5 | 17 | 0 | 3 | 5 | 0 | 46 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 3 | 0 | 0 | 4 | 26 | 0 | 4 | 20 | 0 | 72 | 0 |
| **7:45 AM** | **0** | **0** | **0** | **0** | **0** | **17** | **0** | **4** | **0** | **0** | **10** | **27** | **0** | **4** | **43** | **0** | **105** | 266 |
| **8:00 AM** | **0** | **0** | **0** | **0** | **0** | **17** | **0** | **9** | **0** | **0** | **11** | **25** | **0** | **2** | **13** | **0** | **77** | 300 |
| **8:15 AM** | **0** | **0** | **0** | **0** | **0** | **10** | **0** | **5** | **0** | **0** | **15** | **24** | **0** | **3** | **12** | **0** | **69** | 323 |
| **8:30 AM** | **0** | **0** | **0** | **0** | **0** | **15** | **0** | **3** | **0** | **0** | **18** | **28** | **0** | **6** | **9** | **0** | **79** | **330** |
| 8:45 AM | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 4 | 0 | 0 | 10 | 23 | 0 | 4 | 15 | 0 | 70 | 295 |
| Count Total | 0 | 0 | 0 | 0 | 1 | 105 | 0 | 35 | 0 | 0 | 81 | 186 | 0 | 26 | 127 | 0 | 561 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **0** | **0** | **59** | **0** | **21** | **0** | **0** | **54** | **104** | **0** | **15** | **77** | **0** | **330** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 0 | 3 | 4 | 0 | *7* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:15 AM | 0 | 1 | 4 | 2 | *7* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:30 AM | 0 | 1 | 6 | 0 | *7* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **7:45 AM** | **0** | **0** | **6** | **0** | ***6*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:00 AM** | **0** | **1** | **2** | **0** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:15 AM** | **0** | **0** | **5** | **0** | ***5*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:30 AM** | **0** | **1** | **4** | **0** | ***5*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 8:45 AM | 0 | 0 | 4 | 1 | *5* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 0 | 7 | 35 | 3 | *45* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **Peak Hr** | **0** | **2** | **17** | **0** | ***19*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |

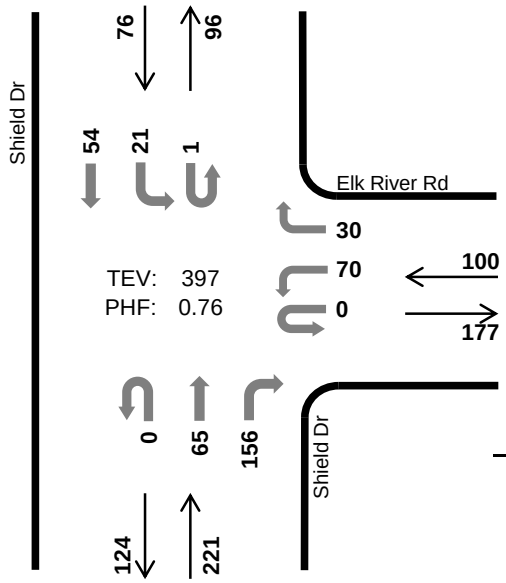
**Mark Skaggs**: (425) 250-0777 mark.skaggs@idaxdata.com

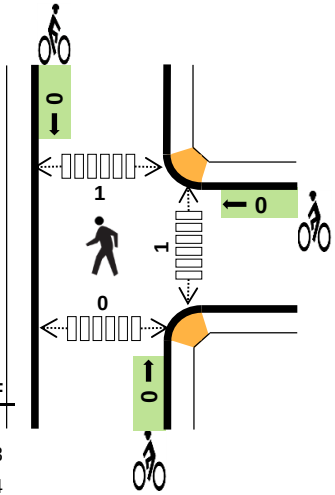
# Shield Dr
# Elk River Rd

**Date: Tue, Mar 03, 2020**
**Count Period: 4:00 PM to 6:00 PM**
**Peak Hour: 4:00 PM to 5:00 PM**

N

Peak Hour




| | HV %: | PHF |
|---|---|---|
| EB | - | - |
| WB | 3.0% | 0.63 |
| NB | 4.5% | 0.84 |
| SB | 5.3% | 0.79 |
| TOTAL | 4.3% | 0.76 |

## Two-Hour Count Summaries

| Interval Start | 0 Eastbound | | | | Elk River Rd Westbound | | | | Shield Dr Northbound | | | | Shield Dr Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| **4:00 PM** | **0** | **0** | **0** | **0** | **0** | **19** | **0** | **21** | **0** | **0** | **21** | **45** | **0** | **8** | **16** | **0** | **130** | 0 |
| **4:15 PM** | **0** | **0** | **0** | **0** | **0** | **25** | **0** | **4** | **0** | **0** | **14** | **39** | **1** | **6** | **15** | **0** | **104** | 0 |
| **4:30 PM** | **0** | **0** | **0** | **0** | **0** | **12** | **0** | **3** | **0** | **0** | **13** | **42** | **0** | **3** | **9** | **0** | **82** | 0 |
| **4:45 PM** | **0** | **0** | **0** | **0** | **0** | **14** | **0** | **2** | **0** | **0** | **17** | **30** | **0** | **4** | **14** | **0** | **81** | **397** |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 3 | 0 | 0 | 10 | 49 | 0 | 21 | 27 | 0 | 122 | 389 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 10 | 30 | 0 | 6 | 12 | 0 | 76 | 361 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 8 | 21 | 0 | 5 | 12 | 0 | 55 | 334 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 16 | 0 | 4 | 7 | 0 | 43 | 296 |
| Count Total | 0 | 0 | 0 | 0 | 1 | 116 | 0 | 33 | 0 | 0 | 101 | 272 | 1 | 57 | 112 | 0 | 693 | 0 |
| **Peak Hour** | **0** | **0** | **0** | **0** | **0** | **70** | **0** | **30** | **0** | **0** | **65** | **156** | **1** | **21** | **54** | **0** | **397** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

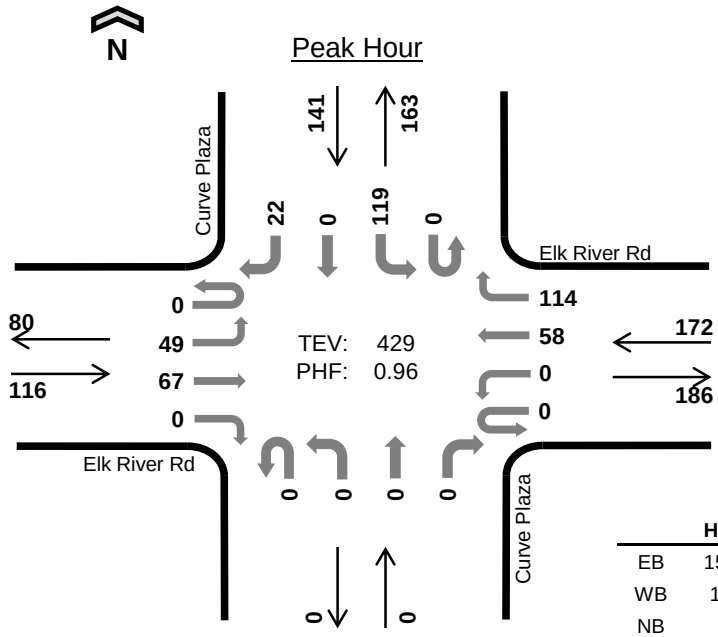
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| **4:00 PM** | **0** | **0** | **3** | **0** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **4:15 PM** | **0** | **2** | **4** | **3** | ***9*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **1** | **0** | *2* |
| **4:30 PM** | **0** | **1** | **1** | **1** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **4:45 PM** | **0** | **0** | **2** | **0** | ***2*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 5:00 PM | 0 | 1 | 1 | 0 | *2* | 0 | 1 | 0 | 0 | *1* | 1 | 0 | 0 | 0 | *1* |
| 5:15 PM | 0 | 0 | 3 | 0 | *3* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 5:30 PM | 0 | 0 | 1 | 0 | *1* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 1 | 0 | *1* |
| 5:45 PM | 0 | 0 | 0 | 2 | *2* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 0 | 4 | 15 | 6 | *25* | 0 | 1 | 0 | 0 | *1* | 2 | 1 | 2 | 0 | *5* |
| **Peak Hr** | **0** | **3** | **10** | **4** | ***17*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **1** | **1** | **0** | ***3*** |

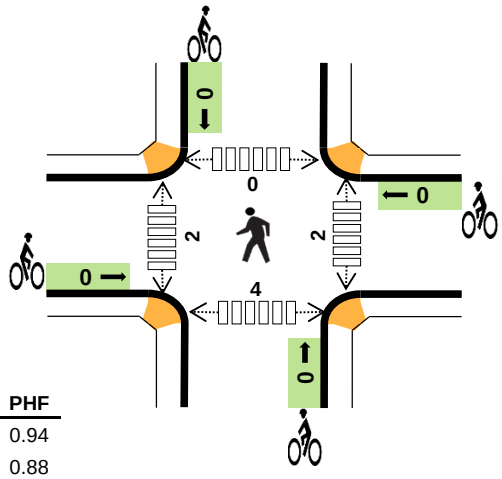
**Mark Skaggs**: (425) 250-0777 mark.skaggs@idaxdata.com

# Curve Plaza
# Elk River Rd

**Date: Tue, Mar 03, 2020**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:30 AM to 8:30 AM**

Peak Hour




| | HV %: | PHF |
|---|---|---|
| EB | 15.5% | 0.94 |
| WB | 1.2% | 0.88 |
| NB | - | - |
| SB | 2.1% | 0.86 |
| TOTAL | 5.4% | 0.96 |

## Two-Hour Count Summaries

| Interval Start | Elk River Rd Eastbound | | | | Elk River Rd Westbound | | | | Curve Plaza Northbound | | | | Curve Plaza Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 5 | 11 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 46 | 0 |
| 7:15 AM | 0 | 8 | 11 | 0 | 0 | 0 | 13 | 17 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 3 | 69 | 0 |
| **7:30 AM** | **0** | **13** | **17** | **0** | **0** | **0** | **14** | **29** | **0** | **0** | **0** | **0** | **0** | **25** | **0** | **3** | **101** | 0 |
| **7:45 AM** | **0** | **15** | **16** | **0** | **0** | **0** | **17** | **26** | **0** | **0** | **0** | **0** | **0** | **32** | **0** | **6** | **112** | 328 |
| **8:00 AM** | **0** | **10** | **17** | **0** | **0** | **0** | **19** | **30** | **0** | **0** | **0** | **0** | **0** | **26** | **0** | **8** | **110** | 392 |
| **8:15 AM** | **0** | **11** | **17** | **0** | **0** | **0** | **8** | **29** | **0** | **0** | **0** | **0** | **0** | **36** | **0** | **5** | **106** | **429** |
| 8:30 AM | 0 | 10 | 24 | 0 | 0 | 0 | 13 | 17 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 6 | 99 | 427 |
| 8:45 AM | 0 | 12 | 16 | 0 | 0 | 0 | 13 | 20 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 6 | 94 | 409 |
| Count Total | 0 | 84 | 129 | 0 | 0 | 0 | 106 | 177 | 0 | 0 | 0 | 0 | 0 | 204 | 0 | 37 | 737 | 0 |
| **Peak Hour** | **0** | **49** | **67** | **0** | **0** | **0** | **58** | **114** | **0** | **0** | **0** | **0** | **0** | **119** | **0** | **22** | **429** | **0** |

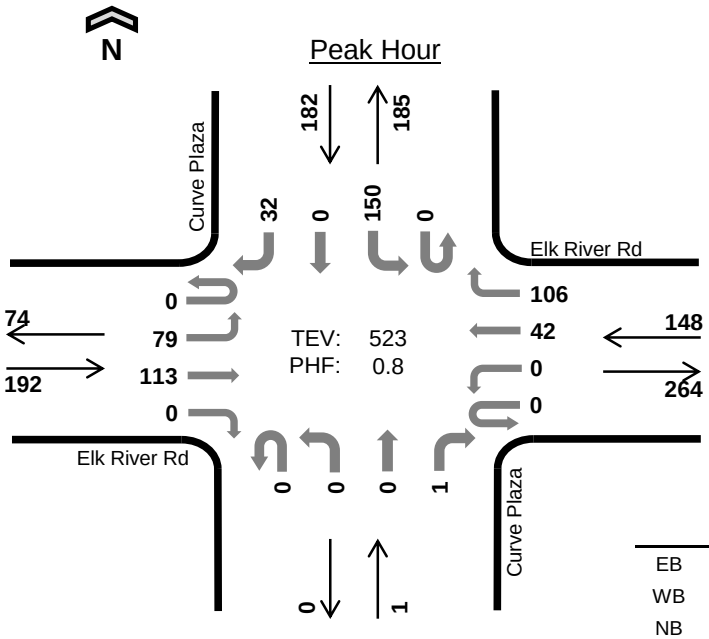
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

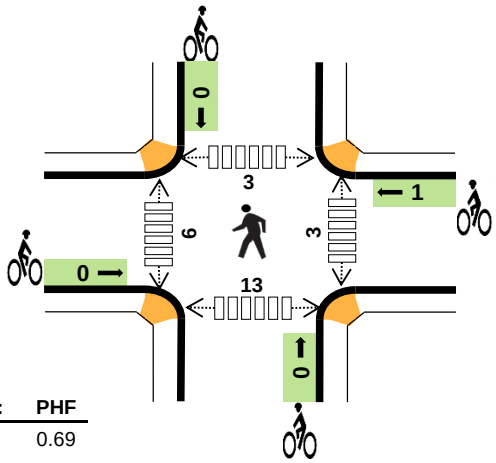
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 3 | 0 | 1 | *8* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 7:15 AM | 5 | 1 | 0 | 0 | *6* | 0 | 0 | 0 | 0 | *0* | 0 | 2 | 0 | 0 | *2* |
| **7:30 AM** | **6** | **2** | **0** | **0** | ***8*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **0** | **1** | *2* |
| **7:45 AM** | **5** | **0** | **0** | **0** | ***5*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **0** | **0** | **0** | *1* |
| **8:00 AM** | **2** | **0** | **0** | **1** | ***3*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **1** | **0** | **1** | *3* |
| **8:15 AM** | **5** | **0** | **0** | **2** | ***7*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **2** | ***2*** |
| 8:30 AM | 3 | 1 | 0 | 2 | *6* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:45 AM | 4 | 0 | 0 | 0 | *4* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 34 | 7 | 0 | 6 | *47* | 0 | 0 | 0 | 0 | *0* | 2 | 4 | 0 | 4 | *10* |
| **Peak Hour** | **18** | **2** | **0** | **3** | ***23*** | **0** | **0** | **0** | **0** | ***0*** | **2** | **2** | **0** | **4** | ***8*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Curve Plaza
# Elk River Rd

**Date:** Tue, Mar 03, 2020
**Count Period:** 4:00 PM to 6:00 PM
**Peak Hour:** 4:15 PM to 5:15 PM




| | HV %: | PHF |
|---|---|---|
| EB | 4.2% | 0.69 |
| WB | 3.4% | 0.86 |
| NB | 0.0% | 0.25 |
| SB | 1.6% | 0.91 |
| TOTAL | 3.1% | 0.80 |

## Two-Hour Count Summaries

| Interval Start | Elk River Rd Eastbound | | | | Elk River Rd Westbound | | | | Curve Plaza Northbound | | | | Curve Plaza Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 23 | 29 | 1 | 0 | 1 | 35 | 6 | 0 | 0 | 1 | 0 | 0 | 30 | 1 | 7 | 134 | 0 |
| **4:15 PM** | **0** | **20** | **24** | **0** | **0** | **0** | **15** | **25** | **0** | **0** | **0** | **1** | **0** | **38** | **0** | **12** | **135** | 0 |
| **4:30 PM** | **0** | **20** | **25** | **0** | **0** | **0** | **8** | **19** | **0** | **0** | **0** | **0** | **0** | **31** | **0** | **7** | **110** | 0 |
| **4:45 PM** | **0** | **14** | **19** | **0** | **0** | **0** | **9** | **29** | **0** | **0** | **0** | **0** | **0** | **37** | **0** | **7** | **115** | 494 |
| **5:00 PM** | **0** | **25** | **45** | **0** | **0** | **0** | **10** | **33** | **0** | **0** | **0** | **0** | **0** | **44** | **0** | **6** | **163** | **523** |
| 5:15 PM | 0 | 14 | 23 | 0 | 0 | 0 | 8 | 29 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 9 | 126 | 514 |
| 5:30 PM | 0 | 13 | 13 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 5 | 91 | 495 |
| 5:45 PM | 0 | 8 | 12 | 0 | 0 | 0 | 2 | 27 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 7 | 97 | 477 |
| Count Total | 0 | 137 | 190 | 1 | 0 | 1 | 91 | 193 | 0 | 0 | 1 | 1 | 0 | 295 | 1 | 60 | 971 | 0 |
| **Peak Hour** | **0** | **79** | **113** | **0** | **0** | **0** | **42** | **106** | **0** | **0** | **0** | **1** | **0** | **150** | **0** | **32** | **523** | **0** |

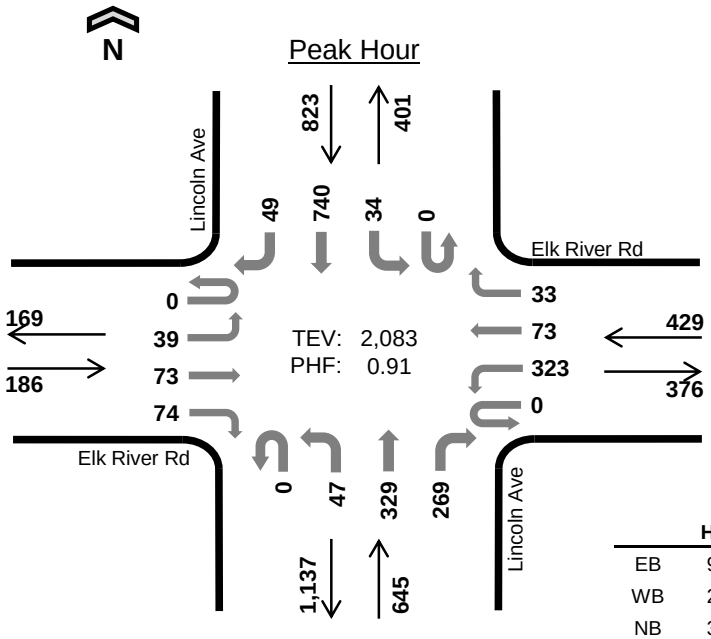
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

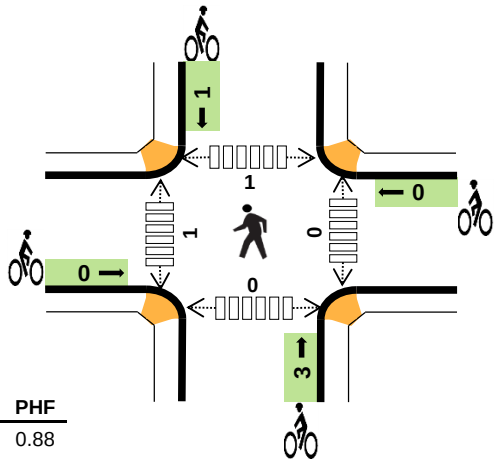
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 3 | 0 | 0 | 0 | *3* | 0 | 0 | 0 | 0 | *0* | 1 | 6 | 0 | 7 | *14* |
| **4:15 PM** | **4** | **3** | **0** | **2** | ***9*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **3** | **0** | *3* |
| **4:30 PM** | **1** | **1** | **0** | **0** | ***2*** | **0** | **0** | **0** | **0** | ***0*** | **2** | **1** | **0** | **4** | *7* |
| **4:45 PM** | **2** | **0** | **0** | **0** | ***2*** | **0** | **0** | **0** | **0** | ***0*** | **1** | **3** | **0** | **3** | *7* |
| **5:00 PM** | **1** | **1** | **0** | **1** | ***3*** | **0** | **1** | **0** | **0** | ***1*** | **0** | **2** | **0** | **6** | ***8*** |
| 5:15 PM | 3 | 0 | 0 | 0 | *3* | 0 | 0 | 0 | 0 | *0* | 0 | 3 | 0 | 1 | *4* |
| 5:30 PM | 1 | 0 | 0 | 1 | *2* | 0 | 0 | 0 | 0 | *0* | 0 | 7 | 0 | 5 | *12* |
| 5:45 PM | 2 | 0 | 0 | 0 | *2* | 0 | 0 | 0 | 0 | *0* | 0 | 2 | 0 | 0 | *2* |
| Count Total | 17 | 5 | 0 | 4 | *26* | 0 | 1 | 0 | 0 | *1* | 4 | 24 | 3 | 26 | *57* |
| **Peak Hour** | **8** | **5** | **0** | **3** | ***16*** | **0** | **1** | **0** | **0** | ***1*** | **3** | **6** | **3** | **13** | ***25*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Lincoln Ave
# Elk River Rd

**Date:** Tue, Mar 03, 2020
**Count Period:** 7:00 AM to 9:00 AM
**Peak Hour:** 7:30 AM to 8:30 AM




| | HV %: | PHF |
|---|---|---|
| EB | 9.7% | 0.88 |
| WB | 2.3% | 0.84 |
| NB | 3.1% | 0.81 |
| SB | 3.0% | 0.88 |
| TOTAL | 3.5% | 0.91 |

## Two-Hour Count Summaries

| Interval Start | Elk River Rd Eastbound | | | | Elk River Rd Westbound | | | | Lincoln Ave Northbound | | | | Lincoln Ave Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 8 | 8 | 3 | 0 | 42 | 8 | 5 | 0 | 2 | 35 | 19 | 0 | 6 | 135 | 8 | 279 | 0 |
| 7:15 AM | 0 | 4 | 11 | 15 | 0 | 41 | 18 | 3 | 0 | 4 | 69 | 36 | 0 | 4 | 143 | 8 | 356 | 0 |
| **7:30 AM** | **0** | **7** | **20** | **13** | **0** | **91** | **19** | **6** | **0** | **5** | **54** | **44** | **0** | **9** | **209** | **16** | **493** | 0 |
| **7:45 AM** | **0** | **10** | **15** | **22** | **0** | **98** | **20** | **9** | **0** | **12** | **93** | **76** | **0** | **10** | **180** | **11** | **556** | 1,684 |
| **8:00 AM** | **0** | **11** | **17** | **18** | **0** | **75** | **25** | **7** | **0** | **14** | **104** | **81** | **0** | **10** | **202** | **10** | **574** | 1,979 |
| **8:15 AM** | **0** | **11** | **21** | **21** | **0** | **59** | **9** | **11** | **0** | **16** | **78** | **68** | **0** | **5** | **149** | **12** | **460** | **2,083** |
| 8:30 AM | 0 | 10 | 19 | 21 | 0 | 64 | 20 | 6 | 0 | 4 | 66 | 54 | 0 | 4 | 108 | 6 | 382 | 1,972 |
| 8:45 AM | 0 | 4 | 21 | 21 | 0 | 65 | 19 | 4 | 0 | 7 | 64 | 54 | 0 | 5 | 149 | 7 | 420 | 1,836 |
| Count Total | 0 | 65 | 132 | 134 | 0 | 535 | 138 | 51 | 0 | 64 | 563 | 432 | 0 | 53 | 1,275 | 78 | 3,520 | 0 |
| **Peak Hour** | **0** | **39** | **73** | **74** | **0** | **323** | **73** | **33** | **0** | **47** | **329** | **269** | **0** | **34** | **740** | **49** | **2,083** | **0** |

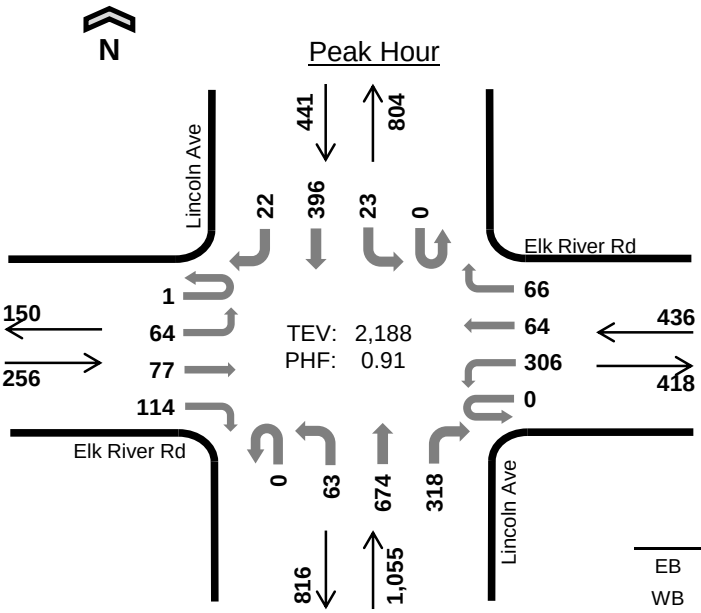
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

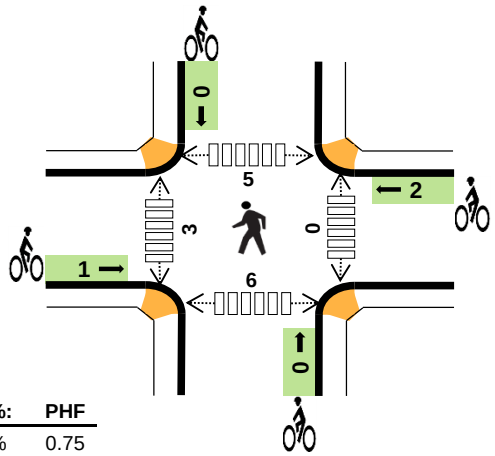
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 3 | 3 | 2 | *12* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 1 | *1* |
| 7:15 AM | 5 | 2 | 6 | 3 | *16* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 0 | 1 | *2* |
| **7:30 AM** | **6** | **3** | **3** | **12** | ***24*** | **0** | **0** | **0** | **1** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **7:45 AM** | **4** | **4** | **1** | **6** | ***15*** | **0** | **0** | **2** | **0** | ***2*** | **0** | **0** | **0** | **0** | *0* |
| **8:00 AM** | **1** | **0** | **8** | **7** | ***16*** | **0** | **0** | **1** | **0** | ***1*** | **0** | **0** | **0** | **0** | *0* |
| **8:15 AM** | **7** | **3** | **8** | **0** | ***18*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **1** | **1** | **0** | ***2*** |
| 8:30 AM | 5 | 4 | 5 | 6 | *20* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 1 | *1* |
| 8:45 AM | 4 | 2 | 3 | 8 | *17* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 36 | 21 | 37 | 44 | *138* | 0 | 0 | 3 | 1 | *4* | 1 | 1 | 1 | 3 | *6* |
| **Peak Hour** | **18** | **10** | **20** | **25** | ***73*** | **0** | **0** | **3** | **1** | ***4*** | **0** | **1** | **1** | **0** | ***2*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Lincoln Ave
# Elk River Rd

**Date: Tue, Mar 03, 2020**
**Count Period: 4:00 PM to 6:00 PM**
**Peak Hour: 4:45 PM to 5:45 PM**




| | HV %: | PHF |
|---|---|---|
| EB | 3.5% | 0.75 |
| WB | 1.8% | 0.83 |
| NB | 3.7% | 0.94 |
| SB | 2.9% | 0.95 |
| TOTAL | 3.2% | 0.91 |

## Two-Hour Count Summaries

| Interval Start | Elk River Rd Eastbound | | | | Elk River Rd Westbound | | | | Lincoln Ave Northbound | | | | Lincoln Ave Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 1 | 14 | 24 | 21 | 0 | 80 | 19 | 20 | 0 | 16 | 148 | 73 | 0 | 3 | 110 | 6 | 535 | 0 |
| 4:15 PM | 0 | 12 | 20 | 28 | 0 | 67 | 20 | 13 | 0 | 14 | 149 | 75 | 0 | 7 | 115 | 6 | 526 | 0 |
| 4:30 PM | 0 | 23 | 20 | 17 | 0 | 59 | 14 | 11 | 0 | 12 | 132 | 56 | 0 | 6 | 85 | 1 | 436 | 0 |
| **4:45 PM** | **1** | **12** | **16** | **28** | **0** | **75** | **15** | **16** | **0** | **17** | **152** | **79** | **0** | **3** | **96** | **7** | **517** | 2,014 |
| **5:00 PM** | **0** | **24** | **26** | **35** | **0** | **93** | **22** | **17** | **0** | **17** | **165** | **90** | **0** | **9** | **97** | **6** | **601** | 2,080 |
| **5:15 PM** | **0** | **14** | **23** | **32** | **0** | **80** | **16** | **23** | **0** | **13** | **184** | **83** | **0** | **9** | **102** | **5** | **584** | 2,138 |
| **5:30 PM** | **0** | **14** | **12** | **19** | **0** | **58** | **11** | **10** | **0** | **16** | **173** | **66** | **0** | **2** | **101** | **4** | **486** | **2,188** |
| 5:45 PM | 0 | 17 | 8 | 27 | 0 | 54 | 11 | 8 | 0 | 11 | 154 | 49 | 0 | 4 | 109 | 6 | 458 | 2,129 |
| Count Total | 2 | 130 | 149 | 207 | 0 | 566 | 128 | 118 | 0 | 116 | 1,257 | 571 | 0 | 43 | 815 | 41 | 4,143 | 0 |
| **Peak Hour** | **1** | **64** | **77** | **114** | **0** | **306** | **64** | **66** | **0** | **63** | **674** | **318** | **0** | **23** | **396** | **22** | **2,188** | **0** |

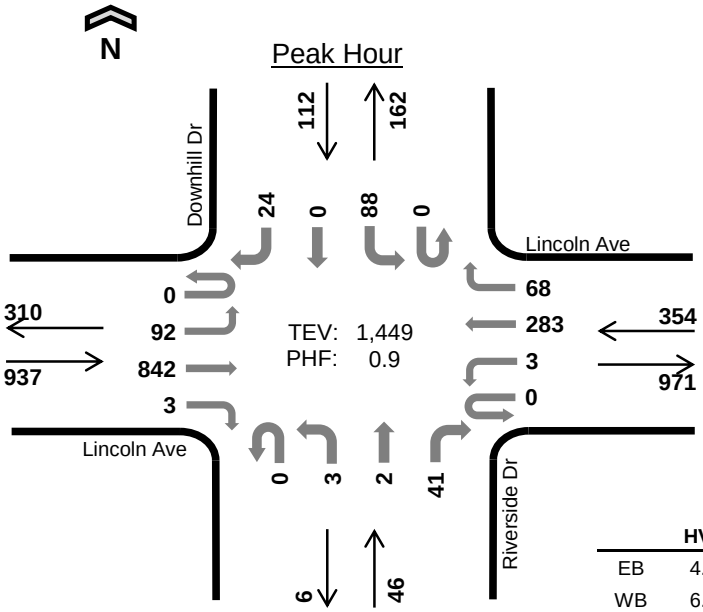
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

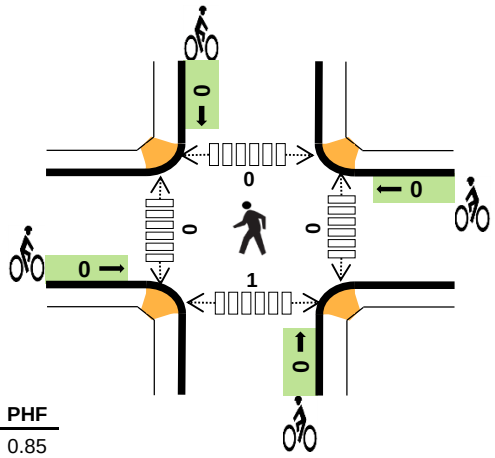
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 3 | 1 | 8 | 4 | *16* | 0 | 0 | 0 | 0 | *0* | 0 | 2 | 0 | 0 | *2* |
| 4:15 PM | 5 | 3 | 6 | 9 | *23* | 0 | 0 | 0 | 0 | *0* | 1 | 0 | 2 | 0 | *3* |
| 4:30 PM | 1 | 0 | 5 | 2 | *8* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 1 | 2 | *3* |
| **4:45 PM** | **3** | **1** | **12** | **4** | ***20*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **1** | **1** | *2* |
| **5:00 PM** | **2** | **3** | **9** | **1** | ***15*** | **0** | **1** | **0** | **0** | ***1*** | **0** | **0** | **1** | **1** | *2* |
| **5:15 PM** | **1** | **4** | **12** | **4** | ***21*** | **1** | **1** | **0** | **0** | ***2*** | **0** | **1** | **3** | **1** | *5* |
| **5:30 PM** | **3** | **0** | **6** | **4** | ***13*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **2** | **0** | **3** | ***5*** |
| 5:45 PM | 1 | 2 | 4 | 2 | *9* | 0 | 1 | 0 | 0 | *1* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 19 | 14 | 62 | 30 | *125* | 1 | 3 | 0 | 0 | *4* | 1 | 5 | 8 | 8 | *22* |
| **Peak Hour** | **9** | **8** | **39** | **13** | ***69*** | **1** | **2** | **0** | **0** | ***3*** | **0** | **3** | **5** | **6** | ***14*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Riverside Dr
# Lincoln Ave

**Date: Tue, Mar 03, 2020**
**Count Period: 7:00 AM to 9:00 AM**
**Peak Hour: 7:15 AM to 8:15 AM**




| | HV %: | PHF |
|---|---|---|
| EB | 4.1% | 0.85 |
| WB | 6.8% | 0.74 |
| NB | 2.2% | 0.82 |
| SB | 0.9% | 0.74 |
| TOTAL | 4.4% | 0.90 |

## Two-Hour Count Summaries

| Interval Start | Lincoln Ave Eastbound | | | | Lincoln Ave Westbound | | | | Riverside Dr Northbound | | | | Downhill Dr Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 12 | 127 | 1 | 0 | 2 | 37 | 2 | 0 | 0 | 0 | 9 | 0 | 20 | 1 | 6 | 217 | 0 |
| **7:15 AM** | **0** | **20** | **159** | **0** | **0** | **0** | **52** | **19** | **0** | **1** | **0** | **7** | **0** | **16** | **0** | **4** | **278** | 0 |
| **7:30 AM** | **0** | **26** | **249** | **1** | **0** | **1** | **54** | **7** | **0** | **0** | **0** | **11** | **0** | **22** | **0** | **5** | **376** | 0 |
| **7:45 AM** | **0** | **30** | **218** | **1** | **0** | **1** | **80** | **21** | **0** | **0** | **1** | **13** | **0** | **24** | **0** | **3** | **392** | 1,263 |
| **8:00 AM** | **0** | **16** | **216** | **1** | **0** | **1** | **97** | **21** | **0** | **2** | **1** | **10** | **0** | **26** | **0** | **12** | **403** | **1,449** |
| 8:15 AM | 0 | 15 | 135 | 1 | 0 | 0 | 66 | 11 | 0 | 0 | 0 | 7 | 0 | 13 | 0 | 5 | 253 | 1,424 |
| 8:30 AM | 0 | 11 | 118 | 0 | 0 | 6 | 51 | 18 | 0 | 0 | 1 | 5 | 0 | 15 | 0 | 4 | 229 | 1,277 |
| 8:45 AM | 0 | 19 | 153 | 1 | 0 | 2 | 57 | 10 | 0 | 0 | 1 | 6 | 0 | 21 | 0 | 4 | 274 | 1,159 |
| Count Total | 0 | 149 | 1,375 | 6 | 0 | 13 | 494 | 109 | 0 | 3 | 4 | 68 | 0 | 157 | 1 | 43 | 2,422 | 0 |
| **Peak Hour** | **0** | **92** | **842** | **3** | **0** | **3** | **283** | **68** | **0** | **3** | **2** | **41** | **0** | **88** | **0** | **24** | **1,449** | **0** |

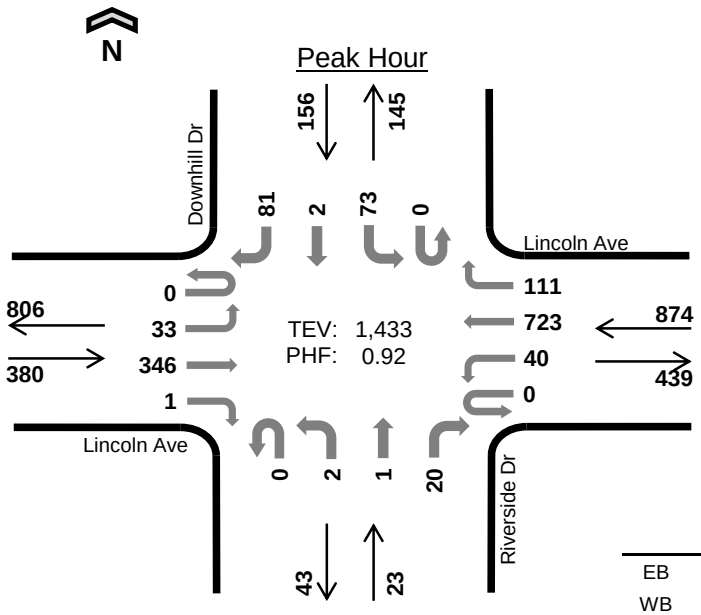
*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

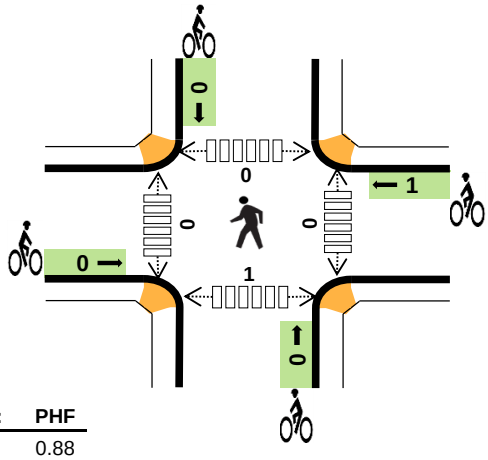
| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 3 | 5 | 0 | 0 | *8* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| **7:15 AM** | **6** | **7** | **0** | **0** | ***13*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **7:30 AM** | **15** | **8** | **1** | **1** | ***25*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **7:45 AM** | **7** | **4** | **0** | **0** | ***11*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **8:00 AM** | **10** | **5** | **0** | **0** | ***15*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **1** | ***1*** |
| 8:15 AM | 3 | 6 | 0 | 0 | *9* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:30 AM | 9 | 6 | 0 | 0 | *15* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 8:45 AM | 12 | 4 | 0 | 2 | *18* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| Count Total | 65 | 45 | 1 | 3 | *114* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 1 | *1* |
| **Peak Hour** | **38** | **24** | **1** | **1** | ***64*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **1** | ***1*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

# Riverside Dr
# Lincoln Ave

**Date:** Tue, Mar 03, 2020
**Count Period:** 4:00 PM to 6:00 PM
**Peak Hour:** 4:45 PM to 5:45 PM




| | HV %: | PHF |
|---|---|---|
| EB | 4.5% | 0.88 |
| WB | 3.7% | 0.91 |
| NB | 0.0% | 0.72 |
| SB | 1.9% | 0.91 |
| TOTAL | 3.6% | 0.92 |

## Two-Hour Count Summaries

| Interval Start | Lincoln Ave Eastbound | | | | Lincoln Ave Westbound | | | | Riverside Dr Northbound | | | | Downhill Dr Southbound | | | | 15-min Total | Rolling One Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 9 | 98 | 2 | 0 | 6 | 143 | 31 | 0 | 0 | 1 | 6 | 0 | 18 | 0 | 14 | 328 | 0 |
| 4:15 PM | 0 | 9 | 102 | 0 | 0 | 7 | 136 | 30 | 0 | 0 | 0 | 3 | 0 | 23 | 1 | 22 | 333 | 0 |
| 4:30 PM | 0 | 11 | 67 | 0 | 0 | 10 | 166 | 21 | 0 | 1 | 0 | 8 | 0 | 17 | 0 | 11 | 312 | 0 |
| **4:45 PM** | **0** | **7** | **89** | **1** | **0** | **8** | **149** | **30** | **0** | **0** | **0** | **3** | **0** | **24** | **1** | **15** | **327** | 1,300 |
| **5:00 PM** | **0** | **11** | **83** | **0** | **0** | **11** | **204** | **24** | **0** | **0** | **1** | **5** | **0** | **10** | **0** | **33** | **382** | 1,354 |
| **5:15 PM** | **0** | **9** | **99** | **0** | **0** | **16** | **193** | **25** | **0** | **1** | **0** | **7** | **0** | **19** | **0** | **21** | **390** | 1,411 |
| **5:30 PM** | **0** | **6** | **75** | **0** | **0** | **5** | **177** | **32** | **0** | **1** | **0** | **5** | **0** | **20** | **1** | **12** | **334** | **1,433** |
| 5:45 PM | 0 | 4 | 90 | 0 | 0 | 11 | 136 | 32 | 0 | 0 | 0 | 7 | 0 | 13 | 0 | 13 | 306 | 1,412 |
| Count Total | 0 | 66 | 703 | 3 | 0 | 74 | 1,304 | 225 | 0 | 3 | 2 | 44 | 0 | 144 | 3 | 141 | 2,712 | 0 |
| **Peak Hour** | **0** | **33** | **346** | **1** | **0** | **40** | **723** | **111** | **0** | **2** | **1** | **20** | **0** | **73** | **2** | **81** | **1,433** | **0** |

*Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.*

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 6 | 4 | 0 | 2 | *12* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 4:15 PM | 13 | 2 | 0 | 1 | *16* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* |
| 4:30 PM | 2 | 4 | 0 | 0 | *6* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 1 | 1 | *2* |
| **4:45 PM** | **4** | **10** | **0** | **1** | ***15*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **5:00 PM** | **3** | **7** | **0** | **1** | ***11*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | *0* |
| **5:15 PM** | **5** | **9** | **0** | **0** | ***14*** | **0** | **1** | **0** | **0** | ***1*** | **0** | **0** | **0** | **1** | *1* |
| **5:30 PM** | **5** | **6** | **0** | **1** | ***12*** | **0** | **0** | **0** | **0** | ***0*** | **0** | **0** | **0** | **0** | ***0*** |
| 5:45 PM | 1 | 3 | 0 | 0 | *4* | 0 | 0 | 0 | 0 | *0* | 0 | 1 | 0 | 1 | *2* |
| Count Total | 39 | 45 | 0 | 6 | *90* | 0 | 1 | 0 | 0 | *1* | 0 | 1 | 1 | 3 | *5* |
| **Peak Hour** | **17** | **32** | **0** | **3** | ***52*** | **0** | **1** | **0** | **0** | ***1*** | **0** | **0** | **0** | **1** | ***1*** |

**Mark Skaggs:** (425) 250-0777 mark.skaggs@idaxdata.com

Table 1: Steamboat Springs Monthly ADT Data Conversion Table

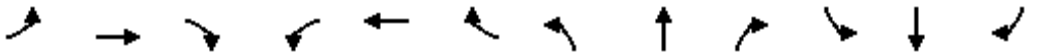
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jan** | 1 | 1.02 | 1.06 | 0.94 | 1.1 | 1.47 | 1.69 | 1.56 | 1.35 | 1.19 | 0.99 | 1.04 |
| **Feb** | 0.98 | 1 | 1.04 | 0.92 | 1.08 | 1.44 | 1.66 | 1.53 | 1.32 | 1.16 | 0.97 | 1.02 |
| **Mar** | 0.94 | 0.96 | 1 | 0.89 | 1.04 | 1.38 | 1.59 | 1.47 | 1.27 | 1.12 | 0.93 | 0.98 |
| **Apr** | 1.06 | 1.08 | 1.12 | 1 | 1.17 | 1.56 | 1.79 | 1.66 | 1.43 | 1.26 | 1.05 | 1.11 |
| **May** | 0.91 | 0.92 | 0.96 | 0.85 | 1 | 1.33 | 1.53 | 1.42 | 1.22 | 1.07 | 0.89 | 0.94 |
| **Jun** | 0.68 | 0.69 | 0.72 | 0.64 | 0.75 | 1 | 1.15 | 1.06 | 0.92 | 0.81 | 0.67 | 0.71 |
| **Jul** | 0.59 | 0.6 | 0.63 | 0.56 | 0.65 | 0.87 | 1 | 0.92 | 0.8 | 0.7 | 0.58 | 0.62 |
| **Aug** | 0.64 | 0.65 | 0.68 | 0.6 | 0.71 | 0.94 | 1.08 | 1 | 0.86 | 0.76 | 0.63 | 0.67 |
| **Sep** | 0.74 | 0.76 | 0.79 | 0.7 | 0.82 | 1.09 | 1.26 | 1.16 | 1 | 0.88 | 0.73 | 0.77 |
| **Oct** | 0.84 | 0.86 | 0.89 | 0.8 | 0.93 | 1.24 | 1.43 | 1.32 | 1.14 | 1 | 0.83 | 0.88 |
| **Nov** | 1.01 | 1.03 | 1.07 | 0.96 | 1.12 | 1.49 | 1.71 | 1.58 | 1.36 | 1.2 | 1 | 1.06 |
| **Dec** | 0.96 | 0.98 | 1.02 | 0.9 | 1.06 | 1.41 | 1.62 | 1.5 | 1.29 | 1.14 | 0.95 | 1 |

# Appendix C

## Synchro Printouts

Existing (Year 2020)
Short Term Background (Year 2022)
Short Term Total (Year 2022)
Long Term Background (Year 2040)
Long Term Total (Year 2040)

Existing AM
6: Elk River Rd & US-40



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 34 | 740 | 49 | 47 | 329 | 269 | 39 | 73 | 74 | 323 | 73 | 33 |
| Future Volume (veh/h) | 34 | 740 | 49 | 47 | 329 | 269 | 39 | 73 | 74 | 323 | 73 | 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 | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 39 | 841 | 0 | 58 | 406 | 0 | 44 | 83 | 0 | 385 | 87 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.81 | 0.81 | 0.81 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 2 | 2 | 2 |
| Cap, veh/h | 63 | 1272 | | 79 | 686 | | 64 | 418 | | 470 | 628 | |
| Arrive On Green | 0.04 | 0.36 | 0.00 | 0.04 | 0.37 | 0.00 | 0.04 | 0.24 | 0.00 | 0.14 | 0.34 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 39 | 841 | 0 | 58 | 406 | 0 | 44 | 83 | 0 | 385 | 87 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 1.8 | 16.4 | 0.0 | 2.7 | 14.4 | 0.0 | 2.1 | 3.1 | 0.0 | 8.9 | 2.6 | 0.0 |
| Cycle Q Clear(g_c), s | 1.8 | 16.4 | 0.0 | 2.7 | 14.4 | 0.0 | 2.1 | 3.1 | 0.0 | 8.9 | 2.6 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 63 | 1272 | | 79 | 686 | | 64 | 418 | | 470 | 628 | |
| V/C Ratio(X) | 0.61 | 0.66 | | 0.73 | 0.59 | | 0.68 | 0.20 | | 0.82 | 0.14 | |
| Avail Cap(c_a), veh/h | 119 | 1272 | | 119 | 686 | | 102 | 418 | | 528 | 628 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 38.9 | 21.9 | 0.0 | 38.6 | 20.8 | 0.0 | 38.8 | 24.9 | 0.0 | 34.4 | 18.9 | 0.0 |
| Incr Delay (d2), s/veh | 9.3 | 2.7 | 0.0 | 12.3 | 3.7 | 0.0 | 12.0 | 1.1 | 0.0 | 9.0 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 6.7 | 0.0 | 1.4 | 6.4 | 0.0 | 1.1 | 1.3 | 0.0 | 4.1 | 1.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 48.1 | 24.7 | 0.0 | 50.8 | 24.5 | 0.0 | 50.8 | 26.0 | 0.0 | 43.4 | 19.4 | 0.0 |
| LnGrp LOS | D | C | | D | C | | D | C | | D | B | |
| Approach Vol, veh/h | | 880 | A | | 464 | A | | 127 | A | | 472 | A |
| Approach Delay, s/veh | | 25.7 | | | 27.8 | | | 34.6 | | | 39.0 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 8.2 | 34.0 | 15.6 | 24.0 | 7.4 | 34.7 | 7.7 | 32.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 5.5 | 29.5 | 12.5 | 19.5 | 5.5 | 29.5 | 5.0 | 27.0 |
| Max Q Clear Time (g_c+I1), s | 4.7 | 18.4 | 10.9 | 5.1 | 3.8 | 16.4 | 4.1 | 4.6 |
| Green Ext Time (p_c), s | 0.0 | 4.1 | 0.3 | 0.2 | 0.0 | 1.9 | 0.0 | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 30.0 |
| HCM 6th LOS | C |

Notes

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

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

Existing AM
7: Shield Dr & Elk River Rd

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.9 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 88 | 40 | 102 | 59 | 21 |
| Future Vol, veh/h | 13 | 88 | 40 | 102 | 59 | 21 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 54 | 54 | 91 | 91 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 13 | 13 | 3 | 3 |
| Mvmt Flow | 24 | 163 | 44 | 112 | 77 | 27 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 156 | 0 | - | 0 | 311 | 100 |
| Stage 1 | - | - | - | - | 100 | - |
| Stage 2 | - | - | - | - | 211 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1436 | - | - | - | 679 | 953 |
| Stage 1 | - | - | - | - | 921 | - |
| Stage 2 | - | - | - | - | 822 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1436 | - | - | - | 667 | 953 |
| Mov Cap-2 Maneuver | - | - | - | - | 667 | - |
| Stage 1 | - | - | - | - | 904 | - |
| Stage 2 | - | - | - | - | 822 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1 | 0 | 10.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1436 | - | - | - | 724 |
| HCM Lane V/C Ratio | 0.017 | - | - | - | 0.144 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 10.8 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.5 |

Existing AM
9: US-40 & Curve Ct/Sunlight Dr

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 23 | 0 | 0 | 6 | 104 | 656 | 1 | 19 | 1121 | 3 |
| Future Vol, veh/h | 0 | 0 | 23 | 0 | 0 | 6 | 104 | 656 | 1 | 19 | 1121 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 64 | 64 | 64 | 75 | 75 | 75 | 80 | 80 | 80 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 0 | 0 | 36 | 0 | 0 | 8 | 130 | 820 | 1 | 21 | 1232 | 3 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 2359 | 2355 | 616 | 1739 | 2358 | 821 | 1235 | 0 | 0 | 821 | 0 | 0 |
| Stage 1 | 1274 | 1274 | - | 1081 | 1081 | - | - | - | - | - | - | - |
| Stage 2 | 1085 | 1081 | - | 658 | 1277 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 22 | 36 | 438 | 63 | 36 | 378 | 553 | - | - | 801 | - | - |
| Stage 1 | 180 | 240 | - | 266 | 296 | - | - | - | - | - | - | - |
| Stage 2 | 265 | 296 | - | 424 | 239 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 17 | 25 | 438 | 44 | 25 | 378 | 553 | - | - | 801 | - | - |
| Mov Cap-2 Maneuver | 17 | 25 | - | 44 | 25 | - | - | - | - | - | - | - |
| Stage 1 | 138 | 220 | - | 203 | 226 | - | - | - | - | - | - | - |
| Stage 2 | 198 | 226 | - | 357 | 219 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 14 | 14.7 | 1.8 | 0.6 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 553 | - | - | 438 | 378 | 801 | - | - |
| HCM Lane V/C Ratio | 0.235 | - | - | 0.082 | 0.021 | 0.026 | - | - |
| HCM Control Delay (s) | 13.5 | - | - | 14 | 14.7 | 9.6 | 0.4 | - |
| HCM Lane LOS | B | - | - | B | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.9 | - | - | 0.3 | 0.1 | 0.1 | - | - |

Existing AM
16: Elk River Rd & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 119 | 0 | 22 | 0 | 0 | 0 | 49 | 67 | 0 | 0 | 58 | 114 |
| Future Vol, veh/h | 119 | 0 | 22 | 0 | 0 | 0 | 49 | 67 | 0 | 0 | 58 | 114 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 0 | 0 | 16 | 16 | 16 | 1 | 1 | 1 |
| Mvmt Flow | 138 | 0 | 26 | 0 | 0 | 0 | 52 | 71 | 0 | 0 | 66 | 130 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 241 | 241 | 66 | 319 | 371 | 71 | 196 | 0 | 0 | - | - | 0 |
| Stage 1 | 66 | 66 | - | 175 | 175 | - | - | - | - | - | - | - |
| Stage 2 | 175 | 175 | - | 144 | 196 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.1 | 6.5 | 6.2 | 4.26 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.5 | 4 | 3.3 | 2.344 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 713 | 660 | 998 | 638 | 562 | 997 | 1297 | - | - | 0 | - | - |
| Stage 1 | 945 | 840 | - | 832 | 758 | - | - | - | - | 0 | - | - |
| Stage 2 | 827 | 754 | - | 864 | 742 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 690 | 632 | 998 | 602 | 538 | 997 | 1297 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 690 | 632 | - | 602 | 538 | - | - | - | - | - | - | - |
| Stage 1 | 905 | 840 | - | 797 | 726 | - | - | - | - | - | - | - |
| Stage 2 | 792 | 722 | - | 842 | 742 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 11.4 | 0 | 3.3 | 0 |
| HCM LOS | B | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1297 | - | - | 725 | - | - | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.226 | - | - | - |
| HCM Control Delay (s) | 7.9 | 0 | - | 11.4 | 0 | - | - |
| HCM Lane LOS | A | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.9 | - | - | - |

Existing AM
20: Shield Dr & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 140 | 0 | 1 | 145 |
| Future Vol, veh/h | 0 | 0 | 140 | 0 | 1 | 145 |
| 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 | 95 | 95 | 62 | 62 |
| Heavy Vehicles, % | 2 | 2 | 14 | 14 | 1 | 1 |
| Mvmt Flow | 0 | 0 | 147 | 0 | 2 | 234 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 385 | 147 | 0 | 0 | 147 | 0 |
| Stage 1 | 147 | - | - | - | - | - |
| Stage 2 | 238 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 618 | 900 | - | - | 1441 | - |
| Stage 1 | 880 | - | - | - | - | - |
| Stage 2 | 802 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 617 | 900 | - | - | 1441 | - |
| Mov Cap-2 Maneuver | 617 | - | - | - | - | - |
| Stage 1 | 880 | - | - | - | - | - |
| Stage 2 | 800 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1441 | - |
| HCM Lane V/C Ratio | - | - | - | 0.001 | - |
| HCM Control Delay (s) | - | - | 0 | 7.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

Existing PM
6: Elk River Rd & US-40

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 23 | 396 | 22 | 63 | 674 | 318 | 65 | 77 | 114 | 306 | 64 | 66 |
| Future Volume (veh/h) | 23 | 396 | 22 | 63 | 674 | 318 | 65 | 77 | 114 | 306 | 64 | 66 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 24 | 417 | 0 | 67 | 717 | 0 | 87 | 103 | 0 | 369 | 77 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 | 0.75 | 0.75 | 0.75 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 |
| Cap, veh/h | 44 | 1309 | | 86 | 728 | | 111 | 499 | | 393 | 601 | |
| Arrive On Green | 0.02 | 0.37 | 0.00 | 0.05 | 0.40 | 0.00 | 0.06 | 0.27 | 0.00 | 0.11 | 0.32 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 24 | 417 | 0 | 67 | 717 | 0 | 87 | 103 | 0 | 369 | 77 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 1.2 | 7.8 | 0.0 | 3.5 | 35.6 | 0.0 | 4.5 | 4.0 | 0.0 | 9.8 | 2.7 | 0.0 |
| Cycle Q Clear(g_c), s | 1.2 | 7.8 | 0.0 | 3.5 | 35.6 | 0.0 | 4.5 | 4.0 | 0.0 | 9.8 | 2.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 44 | 1309 | | 86 | 728 | | 111 | 499 | | 393 | 601 | |
| V/C Ratio(X) | 0.55 | 0.32 | | 0.78 | 0.98 | | 0.79 | 0.21 | | 0.94 | 0.13 | |
| Avail Cap(c_a), veh/h | 96 | 1309 | | 177 | 728 | | 142 | 499 | | 393 | 601 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 44.5 | 20.7 | 0.0 | 43.4 | 27.6 | 0.0 | 42.6 | 26.0 | 0.0 | 40.6 | 22.2 | 0.0 |
| Incr Delay (d2), s/veh | 10.1 | 0.6 | 0.0 | 13.9 | 29.9 | 0.0 | 19.4 | 0.9 | 0.0 | 30.2 | 0.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 3.1 | 0.0 | 1.8 | 20.3 | 0.0 | 2.5 | 1.8 | 0.0 | 5.7 | 1.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 54.6 | 21.3 | 0.0 | 57.3 | 57.5 | 0.0 | 62.0 | 26.9 | 0.0 | 70.8 | 22.6 | 0.0 |
| LnGrp LOS | D | C | | E | E | | E | C | | E | C | |
| Approach Vol, veh/h | | 441 | A | | 784 | A | | 190 | A | | 446 | A |
| Approach Delay, s/veh | | 23.1 | | | 57.5 | | | 43.0 | | | 62.5 | |
| Approach LOS | | C | | | E | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 9.0 | 38.8 | 15.0 | 29.5 | 6.8 | 41.0 | 10.3 | 34.2 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 9.3 | 32.2 | 10.5 | 25.0 | 5.0 | 36.5 | 7.5 | 28.0 |
| Max Q Clear Time (g_c+I1), s | 5.5 | 9.8 | 11.8 | 6.0 | 3.2 | 37.6 | 6.5 | 4.7 |
| Green Ext Time (p_c), s | 0.0 | 2.5 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.3 |

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

Notes

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

Existing PM
7: Shield Dr & Elk River Rd

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 36 | 65 | 45 | 130 | 53 | 5 |
| Future Vol, veh/h | 36 | 65 | 45 | 130 | 53 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 53 | 53 | 74 | 74 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 2 | 2 |
| Mvmt Flow | 68 | 123 | 61 | 176 | 65 | 6 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 237 | 0 | - | 0 | 408 | 149 |
| Stage 1 | - | - | - | - | 149 | - |
| Stage 2 | - | - | - | - | 259 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1342 | - | - | - | 599 | 898 |
| Stage 1 | - | - | - | - | 879 | - |
| Stage 2 | - | - | - | - | 784 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1342 | - | - | - | 567 | 898 |
| Mov Cap-2 Maneuver | - | - | - | - | 567 | - |
| Stage 1 | - | - | - | - | 832 | - |
| Stage 2 | - | - | - | - | 784 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.8 | 0 | 12 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1342 | - | - | - | 586 |
| HCM Lane V/C Ratio | 0.051 | - | - | - | 0.122 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 12 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.4 |

Existing PM
9: US-40 & Curve Ct/Sunlight Dr

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 2 | 0 | 85 | 0 | 1 | 10 | 86 | 1063 | 0 | 4 | 807 | 4 |
| Future Vol, veh/h | 2 | 0 | 85 | 0 | 1 | 10 | 86 | 1063 | 0 | 4 | 807 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 69 | 69 | 69 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 3 | 0 | 142 | 0 | 1 | 14 | 91 | 1131 | 0 | 5 | 917 | 5 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 2248 | 2240 | 459 | 1782 | 2245 | 1131 | 922 | 0 | 0 | 1131 | 0 | 0 |
| Stage 1 | 927 | 927 | - | 1313 | 1313 | - | - | - | - | - | - | - |
| Stage 2 | 1321 | 1313 | - | 469 | 932 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 27 | 43 | 554 | 58 | 42 | 250 | 728 | - | - | 611 | - | - |
| Stage 1 | 293 | 350 | - | 197 | 230 | - | - | - | - | - | - | - |
| Stage 2 | 195 | 230 | - | 549 | 348 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 22 | 37 | 554 | 39 | 36 | 250 | 728 | - | - | 611 | - | - |
| Mov Cap-2 Maneuver | 22 | 37 | - | 39 | 36 | - | - | - | - | - | - | - |
| Stage 1 | 256 | 344 | - | 172 | 201 | - | - | - | - | - | - | - |
| Stage 2 | 160 | 201 | - | 402 | 342 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 21.9 | 29.6 | 0.8 | 0.2 |
| HCM LOS | C | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 728 | - | - | 356 | 162 | 611 | - | - |
| HCM Lane V/C Ratio | 0.126 | - | - | 0.407 | 0.098 | 0.007 | - | - |
| HCM Control Delay (s) | 10.7 | - | - | 21.9 | 29.6 | 10.9 | 0.1 | - |
| HCM Lane LOS | B | - | - | C | D | B | A | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 1.9 | 0.3 | 0 | - | - |

Existing PM
16: Elk River Rd & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 6.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 155 | 0 | 27 | 0 | 0 | 0 | 66 | 100 | 0 | 0 | 31 | 116 |
| Future Vol, veh/h | 155 | 0 | 27 | 0 | 0 | 0 | 66 | 100 | 0 | 0 | 31 | 116 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 92 | 92 | 92 | 59 | 59 | 59 | 85 | 85 | 85 |
| Heavy Vehicles, % | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 4 | 1 | 1 | 1 |
| Mvmt Flow | 176 | 0 | 31 | 0 | 0 | 0 | 112 | 169 | 0 | 0 | 36 | 136 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 429 | 429 | 36 | 513 | 565 | 169 | 172 | 0 | 0 | - | - | 0 |
| Stage 1 | 36 | 36 | - | 393 | 393 | - | - | - | - | - | - | - |
| Stage 2 | 393 | 393 | - | 120 | 172 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | 7.1 | 6.5 | 6.2 | 4.14 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | 3.5 | 4 | 3.3 | 2.236 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 538 | 520 | 1039 | 475 | 437 | 880 | 1393 | - | - | 0 | - | - |
| Stage 1 | 982 | 867 | - | 636 | 609 | - | - | - | - | 0 | - | - |
| Stage 2 | 634 | 608 | - | 889 | 760 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 501 | 474 | 1039 | 429 | 398 | 880 | 1393 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 501 | 474 | - | 429 | 398 | - | - | - | - | - | - | - |
| Stage 1 | 895 | 867 | - | 579 | 555 | - | - | - | - | - | - | - |
| Stage 2 | 578 | 554 | - | 863 | 760 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 15.7 | 0 | 3.1 | 0 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1393 | - | - | 543 | - | - | - |
| HCM Lane V/C Ratio | 0.08 | - | - | 0.381 | - | - | - |
| HCM Control Delay (s) | 7.8 | 0 | - | 15.7 | 0 | - | - |
| HCM Lane LOS | A | A | - | C | A | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 1.8 | - | - | - |

Existing PM
20: Shield Dr & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 175 | 0 | 0 | 119 |
| Future Vol, veh/h | 0 | 0 | 175 | 0 | 0 | 119 |
| 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 | 79 | 79 | 74 | 74 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 1 | 1 |
| Mvmt Flow | 0 | 0 | 222 | 0 | 0 | 161 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 383 | 222 | 0 | 0 | 222 | 0 |
| Stage 1 | 222 | - | - | - | - | - |
| Stage 2 | 161 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 620 | 818 | - | - | 1353 | - |
| Stage 1 | 815 | - | - | - | - | - |
| Stage 2 | 868 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 620 | 818 | - | - | 1353 | - |
| Mov Cap-2 Maneuver | 620 | - | - | - | - | - |
| Stage 1 | 815 | - | - | - | - | - |
| Stage 2 | 868 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1353 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | - | - | 0 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

Short Term Background Conditions AM
6: Elk River Rd & US-40

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 49 | 1074 | 71 | 68 | 478 | 390 | 57 | 106 | 107 | 469 | 106 | 48 |
| Future Volume (veh/h) | 49 | 1074 | 71 | 68 | 478 | 390 | 57 | 106 | 107 | 469 | 106 | 48 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 56 | 1220 | 0 | 84 | 590 | 0 | 65 | 120 | 0 | 558 | 126 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.81 | 0.81 | 0.81 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 2 | 2 | 2 |
| Cap, veh/h | 72 | 1279 | | 101 | 704 | | 82 | 417 | | 589 | 672 | |
| Arrive On Green | 0.04 | 0.36 | 0.00 | 0.06 | 0.38 | 0.00 | 0.05 | 0.24 | 0.00 | 0.17 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 56 | 1220 | 0 | 84 | 590 | 0 | 65 | 120 | 0 | 558 | 126 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 3.3 | 35.4 | 0.0 | 4.9 | 30.4 | 0.0 | 4.0 | 5.9 | 0.0 | 16.8 | 4.9 | 0.0 |
| Cycle Q Clear(g_c), s | 3.3 | 35.4 | 0.0 | 4.9 | 30.4 | 0.0 | 4.0 | 5.9 | 0.0 | 16.8 | 4.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 72 | 1279 | | 101 | 704 | | 82 | 417 | | 589 | 672 | |
| V/C Ratio(X) | 0.78 | 0.95 | | 0.83 | 0.84 | | 0.79 | 0.29 | | 0.95 | 0.19 | |
| Avail Cap(c_a), veh/h | 84 | 1279 | | 101 | 704 | | 162 | 417 | | 589 | 672 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 49.9 | 32.6 | 0.0 | 49.0 | 29.6 | 0.0 | 49.4 | 32.7 | 0.0 | 43.1 | 23.1 | 0.0 |
| Incr Delay (d2), s/veh | 32.0 | 16.3 | 0.0 | 41.8 | 11.4 | 0.0 | 15.4 | 1.7 | 0.0 | 24.7 | 0.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 17.1 | 0.0 | 3.3 | 15.0 | 0.0 | 2.0 | 2.6 | 0.0 | 9.0 | 2.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 82.0 | 48.9 | 0.0 | 90.8 | 41.1 | 0.0 | 64.8 | 34.5 | 0.0 | 67.7 | 23.7 | 0.0 |
| LnGrp LOS | F | D | | F | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1276 | A | | 674 | A | | 185 | A | | 684 | A |
| Approach Delay, s/veh | | 50.3 | | | 47.3 | | | 45.1 | | | 59.6 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 10.5 | 42.6 | 22.4 | 29.5 | 8.8 | 44.3 | 9.7 | 42.2 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 6.0 | 38.1 | 17.9 | 25.0 | 5.0 | 39.1 | 10.2 | 32.7 |
| Max Q Clear Time (g_c+I1), s | 6.9 | 37.4 | 18.8 | 7.9 | 5.3 | 32.4 | 6.0 | 6.9 |
| Green Ext Time (p_c), s | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 2.0 | 0.0 | 0.6 |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 51.5 |
| HCM 6th LOS | | D |

Notes

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

Short Term Background Conditions AM
7: Shield Dr & Elk River Rd

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 19 | 128 | 58 | 148 | 86 | 30 |
| Future Vol, veh/h | 19 | 128 | 58 | 148 | 86 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 54 | 54 | 91 | 91 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 13 | 13 | 3 | 3 |
| Mvmt Flow | 35 | 237 | 64 | 163 | 112 | 39 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 227 | 0 | - | 0 | 453 | 146 |
| Stage 1 | - | - | - | - | 146 | - |
| Stage 2 | - | - | - | - | 307 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1353 | - | - | - | 563 | 898 |
| Stage 1 | - | - | - | - | 879 | - |
| Stage 2 | - | - | - | - | 744 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1353 | - | - | - | 546 | 898 |
| Mov Cap-2 Maneuver | - | - | - | - | 546 | - |
| Stage 1 | - | - | - | - | 853 | - |
| Stage 2 | - | - | - | - | 744 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1 | 0 | 12.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1353 | - | - | - | 608 |
| HCM Lane V/C Ratio | 0.026 | - | - | - | 0.248 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 12.9 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1 |

Short Term Background Conditions AM
9: US-40 & Curve Ct/Sunlight Dr

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.8 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 33 | 0 | 0 | 9 | 151 | 952 | 1 | 28 | 1627 | 4 |
| Future Vol, veh/h | 0 | 0 | 33 | 0 | 0 | 9 | 151 | 952 | 1 | 28 | 1627 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 64 | 64 | 64 | 75 | 75 | 75 | 80 | 80 | 80 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 0 | 0 | 52 | 0 | 0 | 12 | 189 | 1190 | 1 | 31 | 1788 | 4 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3425 | 3419 | 894 | 2525 | 3423 | 1191 | 1792 | 0 | 0 | 1191 | 0 | 0 |
| Stage 1 | 1850 | 1850 | - | 1569 | 1569 | - | - | - | - | - | - | - |
| Stage 2 | 1575 | 1569 | - | 956 | 1854 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 3 | 7 | 288 | 17 | 7 | 231 | 336 | - | - | 579 | - | - |
| Stage 1 | 79 | 126 | - | 140 | 173 | - | - | - | - | - | - | - |
| Stage 2 | 139 | 173 | - | 281 | 125 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | - | 0 | 288 | - | 0 | 231 | 336 | - | - | 579 | - | - |
| Mov Cap-2 Maneuver | - | 0 | - | - | 0 | - | - | - | - | - | - | - |
| Stage 1 | 35 | 0 | - | 61 | 76 | - | - | - | - | - | - | - |
| Stage 2 | 58 | 76 | - | - | 0 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | | | 3.9 | 5.7 |
| HCM LOS | - | - | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 336 | - | - | - | - | 579 | - | - |
| HCM Lane V/C Ratio | 0.562 | - | - | - | - | 0.053 | - | - |
| HCM Control Delay (s) | 28.6 | - | - | - | - | 11.6 | 5.6 | - |
| HCM Lane LOS | D | - | - | - | - | B | A | - |
| HCM 95th %tile Q(veh) | 3.3 | - | - | - | - | 0.2 | - | - |

Short Term Background Conditions AM
16: Elk River Rd & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 173 | 0 | 32 | 0 | 0 | 0 | 71 | 97 | 0 | 0 | 84 | 165 |
| Future Vol, veh/h | 173 | 0 | 32 | 0 | 0 | 0 | 71 | 97 | 0 | 0 | 84 | 165 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 0 | 0 | 16 | 16 | 16 | 1 | 1 | 1 |
| Mvmt Flow | 201 | 0 | 37 | 0 | 0 | 0 | 76 | 103 | 0 | 0 | 95 | 188 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 350 | 350 | 95 | 463 | 538 | 103 | 283 | 0 | 0 | - | - | 0 |
| Stage 1 | 95 | 95 | - | 255 | 255 | - | - | - | - | - | - | - |
| Stage 2 | 255 | 255 | - | 208 | 283 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.1 | 6.5 | 6.2 | 4.26 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.5 | 4 | 3.3 | 2.344 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 605 | 574 | 962 | 513 | 453 | 957 | 1203 | - | - | 0 | - | - |
| Stage 1 | 912 | 816 | - | 754 | 700 | - | - | - | - | 0 | - | - |
| Stage 2 | 749 | 696 | - | 799 | 681 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 574 | 536 | 962 | 468 | 423 | 957 | 1203 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 574 | 536 | - | 468 | 423 | - | - | - | - | - | - | - |
| Stage 1 | 851 | 816 | - | 703 | 653 | - | - | - | - | - | - | - |
| Stage 2 | 699 | 649 | - | 768 | 681 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 14.6 | 0 | 3.5 | 0 |
| HCM LOS | B | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1203 | - | - | 613 | - | - | - |
| HCM Lane V/C Ratio | 0.063 | - | - | 0.389 | - | - | - |
| HCM Control Delay (s) | 8.2 | 0 | - | 14.6 | 0 | - | - |
| HCM Lane LOS | A | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 1.8 | - | - | - |

Short Term Background Conditions AM
20: Shield Dr & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 203 | 0 | 1 | 210 |
| Future Vol, veh/h | 0 | 0 | 203 | 0 | 1 | 210 |
| 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 | 95 | 95 | 62 | 62 |
| Heavy Vehicles, % | 2 | 2 | 14 | 14 | 1 | 1 |
| Mvmt Flow | 0 | 0 | 214 | 0 | 2 | 339 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 557 | 214 | 0 | 0 | 214 | 0 |
| Stage 1 | 214 | - | - | - | - | - |
| Stage 2 | 343 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 491 | 826 | - | - | 1362 | - |
| Stage 1 | 822 | - | - | - | - | - |
| Stage 2 | 719 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 490 | 826 | - | - | 1362 | - |
| Mov Cap-2 Maneuver | 490 | - | - | - | - | - |
| Stage 1 | 822 | - | - | - | - | - |
| Stage 2 | 718 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1362 | - |
| HCM Lane V/C Ratio | - | - | - | 0.001 | - |
| HCM Control Delay (s) | - | - | 0 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

Short Term Background Traffic PM
6: Elk River Rd & US-40

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 33 | 575 | 32 | 91 | 978 | 462 | 93 | 112 | 165 | 444 | 93 | 96 |
| Future Volume (veh/h) | 33 | 575 | 32 | 91 | 978 | 462 | 93 | 112 | 165 | 444 | 93 | 96 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 35 | 605 | 0 | 97 | 1040 | 0 | 124 | 149 | 0 | 535 | 112 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 | 0.75 | 0.75 | 0.75 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 |
| Cap, veh/h | 46 | 1730 | | 119 | 979 | | 146 | 320 | | 493 | 436 | |
| Arrive On Green | 0.03 | 0.49 | 0.00 | 0.07 | 0.53 | 0.00 | 0.08 | 0.17 | 0.00 | 0.14 | 0.23 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 35 | 605 | 0 | 97 | 1040 | 0 | 124 | 149 | 0 | 535 | 112 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 2.8 | 15.2 | 0.0 | 7.9 | 76.5 | 0.0 | 10.0 | 10.5 | 0.0 | 20.5 | 7.0 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 15.2 | 0.0 | 7.9 | 76.5 | 0.0 | 10.0 | 10.5 | 0.0 | 20.5 | 7.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 46 | 1730 | | 119 | 979 | | 146 | 320 | | 493 | 436 | |
| V/C Ratio(X) | 0.76 | 0.35 | | 0.82 | 1.06 | | 0.85 | 0.47 | | 1.09 | 0.26 | |
| Avail Cap(c_a), veh/h | 61 | 1730 | | 195 | 979 | | 180 | 320 | | 493 | 436 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 69.5 | 22.5 | 0.0 | 66.1 | 33.6 | 0.0 | 65.0 | 53.4 | 0.0 | 61.6 | 45.0 | 0.0 |
| Incr Delay (d2), s/veh | 30.7 | 0.6 | 0.0 | 12.7 | 46.6 | 0.0 | 25.3 | 4.8 | 0.0 | 65.7 | 1.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.7 | 6.3 | 0.0 | 3.9 | 44.8 | 0.0 | 5.5 | 5.2 | 0.0 | 13.4 | 3.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 100.2 | 23.1 | 0.0 | 78.8 | 80.3 | 0.0 | 90.3 | 58.2 | 0.0 | 127.4 | 46.4 | 0.0 |
| LnGrp LOS | F | C | | E | F | | F | E | | F | D | |
| Approach Vol, veh/h | | 640 | A | | 1137 | A | | 273 | A | | 647 | A |
| Approach Delay, s/veh | | 27.3 | | | 80.1 | | | 72.7 | | | 113.3 | |
| Approach LOS | | C | | | F | | | E | | | F | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.2 | 75.0 | 25.0 | 29.5 | 8.3 | 81.0 | 16.5 | 38.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 16.0 | 65.5 | 20.5 | 25.0 | 5.0 | 76.5 | 14.8 | 30.7 |
| Max Q Clear Time (g_c+I1), s | 9.9 | 17.2 | 22.5 | 12.5 | 4.8 | 78.5 | 12.0 | 9.0 |
| Green Ext Time (p_c), s | 0.1 | 4.4 | 0.0 | 0.5 | 0.0 | 0.0 | 0.1 | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 74.8 |
| HCM 6th LOS | E |

Notes

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

# Short Term Background Traffic PM
## 7: Shield Dr & Elk River Rd

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.3 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 52 | 94 | 65 | 189 | 75 | 7 |
| Future Vol, veh/h | 52 | 94 | 65 | 189 | 75 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 53 | 53 | 74 | 74 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 2 | 2 |
| Mvmt Flow | 98 | 177 | 88 | 255 | 93 | 9 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 343 | 0 | - | 0 | 589 | 216 |
| Stage 1 | - | - | - | - | 216 | - |
| Stage 2 | - | - | - | - | 373 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1227 | - | - | - | 471 | 824 |
| Stage 1 | - | - | - | - | 820 | - |
| Stage 2 | - | - | - | - | 696 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1227 | - | - | - | 429 | 824 |
| Mov Cap-2 Maneuver | - | - | - | - | 429 | - |
| Stage 1 | - | - | - | - | 747 | - |
| Stage 2 | - | - | - | - | 696 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.9 | 0 | 15.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1227 | - | - | - | 447 |
| HCM Lane V/C Ratio | 0.08 | - | - | - | 0.226 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 15.4 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 0.9 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 40.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 3 | 0 | 123 | 0 | 1 | 15 | 125 | 1543 | 0 | 6 | 1171 | 6 |
| Future Vol, veh/h | 3 | 0 | 123 | 0 | 1 | 15 | 125 | 1543 | 0 | 6 | 1171 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 69 | 69 | 69 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 5 | 0 | 205 | 0 | 1 | 22 | 133 | 1641 | 0 | 7 | 1331 | 7 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3264 | 3252 | 666 | 2587 | 3259 | 1641 | 1338 | 0 | 0 | 1641 | 0 | 0 |
| Stage 1 | 1345 | 1345 | - | 1907 | 1907 | - | - | - | - | - | - | - |
| Stage 2 | 1919 | 1907 | - | 680 | 1352 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 5 | 9 | 407 | 15 | 9 | 125 | 505 | - | - | 389 | - | - |
| Stage 1 | 163 | 222 | - | 89 | 118 | - | - | - | - | - | - | - |
| Stage 2 | 88 | 118 | - | 412 | 220 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | ~ 3 | 6 | 407 | 6 | 6 | 125 | 505 | - | - | 389 | - | - |
| Mov Cap-2 Maneuver | ~ 3 | 6 | - | 6 | 6 | - | - | - | - | - | - | - |
| Stage 1 | 120 | 206 | - | 66 | 87 | - | - | - | - | - | - | - |
| Stage 2 | 53 | 87 | - | 190 | 205 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | $ 628 | 108.8 | 1.1 | 0.6 |
| HCM LOS | F | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 505 | - | - | 97 | 56 | 389 | - | - |
| HCM Lane V/C Ratio | 0.263 | - | - | 2.165 | 0.414 | 0.018 | - | - |
| HCM Control Delay (s) | 14.7 | - | - | $ 628 | 108.8 | 14.4 | 0.5 | - |
| HCM Lane LOS | B | - | - | F | F | B | A | - |
| HCM 95th %tile Q(veh) | 1 | - | - | 18.4 | 1.5 | 0.1 | - | - |

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

Short Term Background Traffic PM
16: Elk River Rd & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 13.3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 225 | 0 | 39 | 0 | 0 | 0 | 96 | 145 | 0 | 0 | 45 | 168 |
| Future Vol, veh/h | 225 | 0 | 39 | 0 | 0 | 0 | 96 | 145 | 0 | 0 | 45 | 168 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 92 | 92 | 92 | 59 | 59 | 59 | 85 | 85 | 85 |
| Heavy Vehicles, % | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 4 | 1 | 1 | 1 |
| Mvmt Flow | 256 | 0 | 44 | 0 | 0 | 0 | 163 | 246 | 0 | 0 | 53 | 198 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 625 | 625 | 53 | 746 | 823 | 246 | 251 | 0 | 0 | - | - | 0 |
| Stage 1 | 53 | 53 | - | 572 | 572 | - | - | - | - | - | - | - |
| Stage 2 | 572 | 572 | - | 174 | 251 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | 7.1 | 6.5 | 6.2 | 4.14 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | 3.5 | 4 | 3.3 | 2.236 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 399 | 403 | 1017 | 332 | 311 | 798 | 1303 | - | - | 0 | - | - |
| Stage 1 | 962 | 853 | - | 509 | 508 | - | - | - | - | 0 | - | - |
| Stage 2 | 507 | 506 | - | 833 | 703 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 355 | 345 | 1017 | 282 | 266 | 798 | 1303 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 355 | 345 | - | 282 | 266 | - | - | - | - | - | - | - |
| Stage 1 | 823 | 853 | - | 435 | 434 | - | - | - | - | - | - | - |
| Stage 2 | 433 | 433 | - | 797 | 703 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 38.3 | 0 | 3.2 | 0 |
| HCM LOS | E | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1303 | - | - | 393 | - | - | - |
| HCM Lane V/C Ratio | 0.125 | - | - | 0.763 | - | - | - |
| HCM Control Delay (s) | 8.2 | 0 | - | 38.3 | 0 | - | - |
| HCM Lane LOS | A | A | - | E | A | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 6.3 | - | - | - |

Short Term Background Traffic PM
20: Shield Dr & Curve Plaza

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 254 | 0 | 0 | 173 |
| Future Vol, veh/h | 0 | 0 | 254 | 0 | 0 | 173 |
| 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 | 79 | 79 | 74 | 74 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 1 | 1 |
| Mvmt Flow | 0 | 0 | 322 | 0 | 0 | 234 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 556 | 322 | 0 | 0 | 322 | 0 |
| Stage 1 | 322 | - | - | - | - | - |
| Stage 2 | 234 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 492 | 719 | - | - | 1244 | - |
| Stage 1 | 735 | - | - | - | - | - |
| Stage 2 | 805 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 492 | 719 | - | - | 1244 | - |
| Mov Cap-2 Maneuver | 492 | - | - | - | - | - |
| Stage 1 | 735 | - | - | - | - | - |
| Stage 2 | 805 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1244 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | - | - | 0 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 49 | 1074 | 83 | 71 | 478 | 390 | 70 | 116 | 116 | 469 | 115 | 48 |
| Future Volume (veh/h) | 49 | 1074 | 83 | 71 | 478 | 390 | 70 | 116 | 116 | 469 | 115 | 48 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 56 | 1220 | 0 | 88 | 590 | 0 | 80 | 132 | 0 | 558 | 137 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.81 | 0.81 | 0.81 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 2 | 2 | 2 |
| Cap, veh/h | 72 | 1279 | | 101 | 704 | | 101 | 417 | | 589 | 651 | |
| Arrive On Green | 0.04 | 0.36 | 0.00 | 0.06 | 0.38 | 0.00 | 0.06 | 0.24 | 0.00 | 0.17 | 0.35 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 56 | 1220 | 0 | 88 | 590 | 0 | 80 | 132 | 0 | 558 | 137 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 3.3 | 35.4 | 0.0 | 5.2 | 30.4 | 0.0 | 5.0 | 6.5 | 0.0 | 16.8 | 5.4 | 0.0 |
| Cycle Q Clear(g_c), s | 3.3 | 35.4 | 0.0 | 5.2 | 30.4 | 0.0 | 5.0 | 6.5 | 0.0 | 16.8 | 5.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 72 | 1279 | | 101 | 704 | | 101 | 417 | | 589 | 651 | |
| V/C Ratio(X) | 0.78 | 0.95 | | 0.87 | 0.84 | | 0.79 | 0.32 | | 0.95 | 0.21 | |
| Avail Cap(c_a), veh/h | 84 | 1279 | | 101 | 704 | | 168 | 417 | | 589 | 651 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 49.9 | 32.6 | 0.0 | 49.1 | 29.6 | 0.0 | 48.7 | 33.0 | 0.0 | 43.1 | 24.1 | 0.0 |
| Incr Delay (d2), s/veh | 32.0 | 16.3 | 0.0 | 51.2 | 11.4 | 0.0 | 13.1 | 2.0 | 0.0 | 24.7 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 17.1 | 0.0 | 3.7 | 15.0 | 0.0 | 2.4 | 2.9 | 0.0 | 9.0 | 2.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 82.0 | 48.9 | 0.0 | 100.3 | 41.1 | 0.0 | 61.8 | 34.9 | 0.0 | 67.7 | 24.8 | 0.0 |
| LnGrp LOS | F | D | | F | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1276 | A | | 678 | A | | 212 | A | | 695 | A |
| Approach Delay, s/veh | | 50.3 | | | 48.8 | | | 45.1 | | | 59.3 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 10.5 | 42.6 | 22.4 | 29.5 | 8.8 | 44.3 | 10.8 | 41.1 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 6.0 | 38.1 | 17.9 | 25.0 | 5.0 | 39.1 | 10.6 | 32.3 |
| Max Q Clear Time (g_c+I1), s | 7.2 | 37.4 | 18.8 | 8.5 | 5.3 | 32.4 | 7.0 | 7.4 |
| Green Ext Time (p_c), s | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 2.0 | 0.0 | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 51.7 |
| HCM 6th LOS | D |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 19 | 130 | 61 | 148 | 109 | 30 |
| Future Vol, veh/h | 19 | 130 | 61 | 148 | 109 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 54 | 54 | 91 | 91 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 13 | 13 | 3 | 3 |
| Mvmt Flow | 35 | 241 | 67 | 163 | 142 | 39 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 230 | 0 | - | 0 | 460 | 149 |
| Stage 1 | - | - | - | - | 149 | - |
| Stage 2 | - | - | - | - | 311 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1350 | - | - | - | 558 | 895 |
| Stage 1 | - | - | - | - | 876 | - |
| Stage 2 | - | - | - | - | 741 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1350 | - | - | - | 541 | 895 |
| Mov Cap-2 Maneuver | - | - | - | - | 541 | - |
| Stage 1 | - | - | - | - | 850 | - |
| Stage 2 | - | - | - | - | 741 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1 | 0 | 13.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1350 | - | - | - | 591 |
| HCM Lane V/C Ratio | 0.026 | - | - | - | 0.305 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 13.7 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 55 | 0 | 0 | 9 | 175 | 955 | 1 | 28 | 1636 | 4 |
| Future Vol, veh/h | 0 | 0 | 55 | 0 | 0 | 9 | 175 | 955 | 1 | 28 | 1636 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 64 | 64 | 64 | 75 | 75 | 75 | 80 | 80 | 80 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 0 | 0 | 86 | 0 | 0 | 12 | 219 | 1194 | 1 | 31 | 1798 | 4 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3499 | 3493 | 899 | 2594 | 3497 | 1195 | 1802 | 0 | 0 | 1195 | 0 | 0 |
| Stage 1 | 1860 | 1860 | - | 1633 | 1633 | - | - | - | - | - | - | - |
| Stage 2 | 1639 | 1633 | - | 961 | 1864 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 3 | 7 | 286 | 15 | 6 | 229 | 333 | - | - | 577 | - | - |
| Stage 1 | 77 | 124 | - | 129 | 161 | - | - | - | - | - | - | - |
| Stage 2 | 128 | 161 | - | 279 | 124 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 1 | 2 | 286 | 5 | 2 | 229 | 333 | - | - | 577 | - | - |
| Mov Cap-2 Maneuver | 1 | 2 | - | 5 | 2 | - | - | - | - | - | - | - |
| Stage 1 | 26 | 124 | - | 44 | 55 | - | - | - | - | - | - | - |
| Stage 2 | 42 | 55 | - | 195 | 124 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 22.9 | 21.6 | 5.3 | 0.2 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 333 | - | - | 286 | 229 | 577 | - | - |
| HCM Lane V/C Ratio | 0.657 | - | - | 0.3 | 0.052 | 0.053 | - | - |
| HCM Control Delay (s) | 34.3 | - | - | 22.9 | 21.6 | 11.6 | 0 | - |
| HCM Lane LOS | D | - | - | C | C | B | A | - |
| HCM 95th %tile Q(veh) | 4.4 | - | - | 1.2 | 0.2 | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 6.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↔ | | | | ↱ | | ↔ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 173 | 0 | 32 | 0 | 0 | 32 | 71 | 97 | 0 | 0 | 108 | 165 |
| Future Vol, veh/h | 173 | 0 | 32 | 0 | 0 | 32 | 71 | 97 | 0 | 0 | 108 | 165 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 0 | 0 | 16 | 16 | 16 | 1 | 1 | 1 |
| Mvmt Flow | 201 | 0 | 37 | 0 | 0 | 35 | 76 | 103 | 0 | 0 | 123 | 188 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 396 | 378 | 123 | - | - | 103 | 311 | 0 | 0 | - | - | 0 |
| Stage 1 | 123 | 123 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 273 | 255 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | - | - | 6.2 | 4.26 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | - | - | 3.3 | 2.344 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 564 | 554 | 928 | 0 | 0 | 957 | 1174 | - | - | 0 | - | - |
| Stage 1 | 881 | 794 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | 733 | 696 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 515 | 516 | 928 | - | - | 957 | 1174 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 515 | 516 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | 820 | 794 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 658 | 648 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 16.4 | 8.9 | 3.5 | 0 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1174 | - | - | 553 | 957 | - | - |
| HCM Lane V/C Ratio | 0.064 | - | - | 0.431 | 0.036 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | - | 16.4 | 8.9 | - | - |
| HCM Lane LOS | A | A | - | C | A | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 2.2 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 3 | 203 | 3 | 28 | 210 |
| Future Vol, veh/h | 6 | 3 | 203 | 3 | 28 | 210 |
| 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 | 95 | 95 | 62 | 62 |
| Heavy Vehicles, % | 2 | 2 | 14 | 14 | 1 | 1 |
| Mvmt Flow | 7 | 3 | 214 | 3 | 45 | 339 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 645 | 216 | 0 | 0 | 217 | 0 |
| Stage 1 | 216 | - | - | - | - | - |
| Stage 2 | 429 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 437 | 824 | - | - | 1359 | - |
| Stage 1 | 820 | - | - | - | - | - |
| Stage 2 | 657 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 419 | 824 | - | - | 1359 | - |
| Mov Cap-2 Maneuver | 419 | - | - | - | - | - |
| Stage 1 | 820 | - | - | - | - | - |
| Stage 2 | 630 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 12.3 | 0 | 0.9 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 501 | 1359 | - |
| HCM Lane V/C Ratio | - | - | 0.02 | 0.033 | - |
| HCM Control Delay (s) | - | - | 12.3 | 7.7 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 30 | 2 | 18 | 179 | 25 | 1 | 0 | 6 | 18 | 0 | 0 |
| Future Vol, veh/h | 0 | 30 | 2 | 18 | 179 | 25 | 1 | 0 | 6 | 18 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 33 | 2 | 20 | 195 | 27 | 1 | 0 | 7 | 20 | 0 | 0 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 222 | 0 | 0 | 35 | 0 | 0 | 283 | 296 | 34 | 287 | 284 | 209 |
| Stage 1 | - | - | - | - | - | - | 34 | 34 | - | 249 | 249 | - |
| Stage 2 | - | - | - | - | - | - | 249 | 262 | - | 38 | 35 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1347 | - | - | 1576 | - | - | 669 | 616 | 1039 | 665 | 625 | 831 |
| Stage 1 | - | - | - | - | - | - | 982 | 867 | - | 755 | 701 | - |
| Stage 2 | - | - | - | - | - | - | 755 | 691 | - | 977 | 866 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1347 | - | - | 1576 | - | - | 662 | 607 | 1039 | 653 | 616 | 831 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 662 | 607 | - | 653 | 616 | - |
| Stage 1 | - | - | - | - | - | - | 982 | 867 | - | 755 | 690 | - |
| Stage 2 | - | - | - | - | - | - | 744 | 681 | - | 971 | 866 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 0.6 | 8.8 | 10.7 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 961 | 1347 | - | - | 1576 | - | - | 653 |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.012 | - | - | 0.03 |
| HCM Control Delay (s) | 8.8 | 0 | - | - | 7.3 | 0 | - | 10.7 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 33 | 575 | 42 | 94 | 978 | 462 | 100 | 117 | 170 | 444 | 101 | 96 |
| Future Volume (veh/h) | 33 | 575 | 42 | 94 | 978 | 462 | 100 | 117 | 170 | 444 | 101 | 96 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 35 | 605 | 0 | 100 | 1040 | 0 | 133 | 156 | 0 | 535 | 122 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 | 0.75 | 0.75 | 0.75 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 |
| Cap, veh/h | 46 | 1723 | | 122 | 979 | | 156 | 320 | | 493 | 426 | |
| Arrive On Green | 0.03 | 0.49 | 0.00 | 0.07 | 0.53 | 0.00 | 0.09 | 0.17 | 0.00 | 0.14 | 0.23 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 35 | 605 | 0 | 100 | 1040 | 0 | 133 | 156 | 0 | 535 | 122 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 2.8 | 15.2 | 0.0 | 8.1 | 76.5 | 0.0 | 10.8 | 11.0 | 0.0 | 20.5 | 7.7 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 15.2 | 0.0 | 8.1 | 76.5 | 0.0 | 10.8 | 11.0 | 0.0 | 20.5 | 7.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 46 | 1723 | | 122 | 979 | | 156 | 320 | | 493 | 426 | |
| V/C Ratio(X) | 0.76 | 0.35 | | 0.82 | 1.06 | | 0.86 | 0.49 | | 1.09 | 0.29 | |
| Avail Cap(c_a), veh/h | 61 | 1723 | | 195 | 979 | | 182 | 320 | | 493 | 426 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 69.5 | 22.7 | 0.0 | 66.0 | 33.6 | 0.0 | 64.6 | 53.6 | 0.0 | 61.6 | 45.9 | 0.0 |
| Incr Delay (d2), s/veh | 30.7 | 0.6 | 0.0 | 13.6 | 46.6 | 0.0 | 27.8 | 5.2 | 0.0 | 65.7 | 1.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.7 | 6.4 | 0.0 | 4.0 | 44.8 | 0.0 | 6.0 | 5.5 | 0.0 | 13.4 | 3.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 100.2 | 23.2 | 0.0 | 79.6 | 80.3 | 0.0 | 92.4 | 58.8 | 0.0 | 127.4 | 47.5 | 0.0 |
| LnGrp LOS | F | C | | E | F | | F | E | | F | D | |
| Approach Vol, veh/h | | 640 | A | | 1140 | A | | 289 | A | | 657 | A |
| Approach Delay, s/veh | | 27.5 | | | 80.2 | | | 74.3 | | | 112.5 | |
| Approach LOS | | C | | | F | | | E | | | F | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.5 | 74.8 | 25.0 | 29.5 | 8.3 | 81.0 | 17.3 | 37.2 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 16.0 | 65.5 | 20.5 | 25.0 | 5.0 | 76.5 | 14.9 | 30.6 |
| Max Q Clear Time (g_c+I1), s | 10.1 | 17.2 | 22.5 | 13.0 | 4.8 | 78.5 | 12.8 | 9.7 |
| Green Ext Time (p_c), s | 0.1 | 4.4 | 0.0 | 0.5 | 0.0 | 0.0 | 0.1 | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 75.0 |
| HCM 6th LOS | E |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.9 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 52 | 97 | 67 | 189 | 96 | 7 |
| Future Vol, veh/h | 52 | 97 | 67 | 189 | 96 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 53 | 53 | 74 | 74 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 2 | 2 |
| Mvmt Flow | 98 | 183 | 91 | 255 | 119 | 9 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 346 | 0 | - | 0 | 598 | 219 |
| Stage 1 | - | - | - | - | 219 | - |
| Stage 2 | - | - | - | - | 379 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1224 | - | - | - | 465 | 821 |
| Stage 1 | - | - | - | - | 817 | - |
| Stage 2 | - | - | - | - | 692 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1224 | - | - | - | 424 | 821 |
| Mov Cap-2 Maneuver | - | - | - | - | 424 | - |
| Stage 1 | - | - | - | - | 744 | - |
| Stage 2 | - | - | - | - | 692 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.9 | 0 | 16.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1224 | - | - | - | 438 |
| HCM Lane V/C Ratio | 0.08 | - | - | - | 0.29 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 16.5 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 1.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 71.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 3 | 0 | 134 | 0 | 1 | 15 | 147 | 1545 | 0 | 6 | 1176 | 6 |
| Future Vol, veh/h | 3 | 0 | 134 | 0 | 1 | 15 | 147 | 1545 | 0 | 6 | 1176 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 69 | 69 | 69 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 5 | 0 | 223 | 0 | 1 | 22 | 156 | 1644 | 0 | 7 | 1336 | 7 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3318 | 3306 | 668 | 2638 | 3313 | 1644 | 1343 | 0 | 0 | 1644 | 0 | 0 |
| Stage 1 | 1350 | 1350 | - | 1956 | 1956 | - | - | - | - | - | - | - |
| Stage 2 | 1968 | 1956 | - | 682 | 1357 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | ~ 4 | 9 | 405 | 14 | 9 | 124 | 503 | - | - | 388 | - | - |
| Stage 1 | 161 | 221 | - | 84 | 111 | - | - | - | - | - | - | - |
| Stage 2 | 82 | 111 | - | 411 | 219 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | ~ 2 | 6 | 405 | 5 | 6 | 124 | 503 | - | - | 388 | - | - |
| Mov Cap-2 Maneuver | ~ 2 | 6 | - | 5 | 6 | - | - | - | - | - | - | - |
| Stage 1 | 111 | 205 | - | 58 | 77 | - | - | - | - | - | - | - |
| Stage 2 | 46 | 77 | - | 171 | 203 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, $ | 1039.7 | 108.8 | 1.3 | 0.6 |
| HCM LOS | F | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 503 | - | - | 75 | 56 | 388 | - | - |
| HCM Lane V/C Ratio | 0.311 | - | - | 3.044 | 0.414 | 0.018 | - | - |
| HCM Control Delay (s) | 15.4 | - | - | $ 1039.7 | 108.8 | 14.4 | 0.5 | - |
| HCM Lane LOS | C | - | - | F | F | B | A | - |
| HCM 95th %tile Q(veh) | 1.3 | - | - | 22.9 | 1.5 | 0.1 | - | - |

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 15.8 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | | ↱ | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 225 | 0 | 39 | 0 | 0 | 16 | 96 | 145 | 0 | 0 | 66 | 168 |
| Future Vol, veh/h | 225 | 0 | 39 | 0 | 0 | 16 | 96 | 145 | 0 | 0 | 66 | 168 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 92 | 92 | 92 | 59 | 59 | 59 | 85 | 85 | 85 |
| Heavy Vehicles, % | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 4 | 1 | 1 | 1 |
| Mvmt Flow | 256 | 0 | 44 | 0 | 0 | 17 | 163 | 246 | 0 | 0 | 78 | 198 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 659 | 650 | 78 | - | - | 246 | 276 | 0 | 0 | - | - | 0 |
| Stage 1 | 78 | 78 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 581 | 572 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | - | - | 6.2 | 4.14 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | - | - | 3.3 | 2.236 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 378 | 390 | 985 | 0 | 0 | 798 | 1275 | - | - | 0 | - | - |
| Stage 1 | 933 | 832 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | 501 | 506 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 328 | 332 | 985 | - | - | 798 | 1275 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 328 | 332 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | 795 | 832 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 418 | 431 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 47.7 | 9.6 | 3.3 | 0 |
| HCM LOS | E | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1275 | - | - | 364 | 798 | - | - |
| HCM Lane V/C Ratio | 0.128 | - | - | 0.824 | 0.022 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | - | 47.7 | 9.6 | - | - |
| HCM Lane LOS | A | A | - | E | A | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 7.3 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 2 | 254 | 2 | 23 | 173 |
| Future Vol, veh/h | 3 | 2 | 254 | 2 | 23 | 173 |
| 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 | 79 | 79 | 74 | 74 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 1 | 1 |
| Mvmt Flow | 3 | 2 | 322 | 3 | 31 | 234 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 620 | 324 | 0 | 0 | 325 | 0 |
| Stage 1 | 324 | - | - | - | - | - |
| Stage 2 | 296 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 452 | 717 | - | - | 1240 | - |
| Stage 1 | 733 | - | - | - | - | - |
| Stage 2 | 755 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 439 | 717 | - | - | 1240 | - |
| Mov Cap-2 Maneuver | 439 | - | - | - | - | - |
| Stage 1 | 733 | - | - | - | - | - |
| Stage 2 | 733 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 12 | 0 | 0.9 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 520 | 1240 | - |
| HCM Lane V/C Ratio | - | - | 0.01 | 0.025 | - |
| HCM Control Delay (s) | - | - | 12 | 8 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0.1 | - |

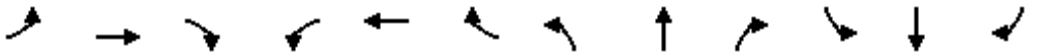
| Intersection | |
|---|---|
| Int Delay, s/veh | 1.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 102 | 2 | 17 | 132 | 22 | 3 | 0 | 26 | 9 | 0 | 0 |
| Future Vol, veh/h | 0 | 102 | 2 | 17 | 132 | 22 | 3 | 0 | 26 | 9 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 111 | 2 | 18 | 143 | 24 | 3 | 0 | 28 | 10 | 0 | 0 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 167 | 0 | 0 | 113 | 0 | 0 | 303 | 315 | 112 | 317 | 304 | 155 |
| Stage 1 | - | - | - | - | - | - | 112 | 112 | - | 191 | 191 | - |
| Stage 2 | - | - | - | - | - | - | 191 | 203 | - | 126 | 113 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1411 | - | - | 1476 | - | - | 649 | 601 | 941 | 636 | 609 | 891 |
| Stage 1 | - | - | - | - | - | - | 893 | 803 | - | 811 | 742 | - |
| Stage 2 | - | - | - | - | - | - | 811 | 733 | - | 878 | 802 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1411 | - | - | 1476 | - | - | 643 | 593 | 941 | 611 | 601 | 891 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 643 | 593 | - | 611 | 601 | - |
| Stage 1 | - | - | - | - | - | - | 893 | 803 | - | 811 | 732 | - |
| Stage 2 | - | - | - | - | - | - | 800 | 723 | - | 852 | 802 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 0.7 | 9.2 | 11 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 898 | 1411 | - | - | 1476 | - | - | 611 |
| HCM Lane V/C Ratio | 0.035 | - | - | - | 0.013 | - | - | 0.016 |
| HCM Control Delay (s) | 9.2 | 0 | - | - | 7.5 | 0 | - | 11 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 56 | 1229 | 81 | 78 | 546 | 447 | 65 | 121 | 123 | 536 | 121 | 55 |
| Future Volume (veh/h) | 56 | 1229 | 81 | 78 | 546 | 447 | 65 | 121 | 123 | 536 | 121 | 55 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 64 | 1397 | 0 | 96 | 674 | 0 | 74 | 138 | 0 | 638 | 144 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.81 | 0.81 | 0.81 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 2 | 2 | 2 |
| Cap, veh/h | 79 | 1438 | | 106 | 785 | | 93 | 350 | | 650 | 622 | |
| Arrive On Green | 0.04 | 0.41 | 0.00 | 0.06 | 0.42 | 0.00 | 0.06 | 0.20 | 0.00 | 0.19 | 0.33 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 64 | 1397 | 0 | 96 | 674 | 0 | 74 | 138 | 0 | 638 | 144 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 4.5 | 48.6 | 0.0 | 6.7 | 41.1 | 0.0 | 5.5 | 8.6 | 0.0 | 23.0 | 7.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 48.6 | 0.0 | 6.7 | 41.1 | 0.0 | 5.5 | 8.6 | 0.0 | 23.0 | 7.0 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 79 | 1438 | | 106 | 785 | | 93 | 350 | | 650 | 622 | |
| V/C Ratio(X) | 0.81 | 0.97 | | 0.91 | 0.86 | | 0.80 | 0.39 | | 0.98 | 0.23 | |
| Avail Cap(c_a), veh/h | 79 | 1438 | | 106 | 785 | | 168 | 350 | | 650 | 622 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 59.2 | 36.3 | 0.0 | 58.4 | 32.7 | 0.0 | 58.3 | 43.4 | 0.0 | 50.5 | 30.2 | 0.0 |
| Incr Delay (d2), s/veh | 44.3 | 17.8 | 0.0 | 58.4 | 11.7 | 0.0 | 14.2 | 3.3 | 0.0 | 30.7 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 23.5 | 0.0 | 4.7 | 20.2 | 0.0 | 2.6 | 4.0 | 0.0 | 12.5 | 3.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 103.5 | 54.1 | 0.0 | 116.8 | 44.4 | 0.0 | 72.6 | 46.7 | 0.0 | 81.2 | 31.1 | 0.0 |
| LnGrp LOS | F | D | | F | D | | E | D | | F | C | |
| Approach Vol, veh/h | | 1461 | A | | 770 | A | | 212 | A | | 782 | A |
| Approach Delay, s/veh | | 56.2 | | | 53.4 | | | 55.7 | | | 72.0 | |
| Approach LOS | | E | | | D | | | E | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 12.0 | 55.5 | 28.0 | 29.5 | 10.1 | 57.4 | 11.5 | 46.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 7.5 | 51.0 | 23.5 | 25.0 | 5.6 | 52.9 | 12.6 | 35.9 |
| Max Q Clear Time (g_c+I1), s | 8.7 | 50.6 | 25.0 | 10.6 | 6.5 | 43.1 | 7.5 | 9.0 |
| Green Ext Time (p_c), s | 0.0 | 0.3 | 0.0 | 0.5 | 0.0 | 3.0 | 0.1 | 0.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 59.3 |
| HCM 6th LOS | E |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 22 | 146 | 66 | 169 | 98 | 35 |
| Future Vol, veh/h | 22 | 146 | 66 | 169 | 98 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 54 | 54 | 91 | 91 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 13 | 13 | 3 | 3 |
| Mvmt Flow | 41 | 270 | 73 | 186 | 127 | 45 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 259 | 0 | - | 0 | 518 | 166 |
| Stage 1 | - | - | - | - | 166 | - |
| Stage 2 | - | - | - | - | 352 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1317 | - | - | - | 516 | 876 |
| Stage 1 | - | - | - | - | 861 | - |
| Stage 2 | - | - | - | - | 710 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1317 | - | - | - | 497 | 876 |
| Mov Cap-2 Maneuver | - | - | - | - | 497 | - |
| Stage 1 | - | - | - | - | 829 | - |
| Stage 2 | - | - | - | - | 710 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1 | 0 | 14.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1317 | - | - | - | 561 |
| HCM Lane V/C Ratio | 0.031 | - | - | - | 0.308 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 14.2 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 232 | 0 | 2 | 241 |
| Future Vol, veh/h | 0 | 0 | 232 | 0 | 2 | 241 |
| 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 | 0 | 0 | 252 | 0 | 2 | 262 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 518 | 252 | 0 | 0 | 252 | 0 |
| Stage 1 | 252 | - | - | - | - | - |
| Stage 2 | 266 | - | - | - | - | - |
| 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 | 518 | 787 | - | - | 1313 | - |
| Stage 1 | 790 | - | - | - | - | - |
| Stage 2 | 779 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 517 | 787 | - | - | 1313 | - |
| Mov Cap-2 Maneuver | 517 | - | - | - | - | - |
| Stage 1 | 790 | - | - | - | - | - |
| Stage 2 | 777 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1313 | - |
| HCM Lane V/C Ratio | - | - | - | 0.002 | - |
| HCM Control Delay (s) | - | - | 0 | 7.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 38 | 0 | 0 | 10 | 173 | 1089 | 2 | 32 | 1861 | 5 |
| Future Vol, veh/h | 0 | 0 | 38 | 0 | 0 | 10 | 173 | 1089 | 2 | 32 | 1861 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 64 | 64 | 64 | 75 | 75 | 75 | 80 | 80 | 80 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 0 | 0 | 59 | 0 | 0 | 13 | 216 | 1361 | 3 | 35 | 2045 | 5 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3916 | 3911 | 1023 | 2888 | 3915 | 1363 | 2050 | 0 | 0 | 1364 | 0 | 0 |
| Stage 1 | 2115 | 2115 | - | 1795 | 1795 | - | - | - | - | - | - | - |
| Stage 2 | 1801 | 1796 | - | 1093 | 2120 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 1 | 3 | 237 | 9 | 3 | 183 | 266 | - | - | 497 | - | - |
| Stage 1 | 53 | 92 | - | 104 | 134 | - | - | - | - | - | - | - |
| Stage 2 | 103 | 134 | - | 232 | 92 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 0 | 1 | 237 | 2 | 1 | 183 | 266 | - | - | 497 | - | - |
| Mov Cap-2 Maneuver | 0 | 1 | - | 2 | 1 | - | - | - | - | - | - | - |
| Stage 1 | 10 | 92 | - | 20 | 25 | - | - | - | - | - | - | - |
| Stage 2 | 18 | 25 | - | 174 | 92 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 25.2 | 26.2 | 8 | 0.2 |
| HCM LOS | D | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 266 | - | - | 237 | 183 | 497 | - | - |
| HCM Lane V/C Ratio | 0.813 | - | - | 0.251 | 0.073 | 0.071 | - | - |
| HCM Control Delay (s) | 58.4 | - | - | 25.2 | 26.2 | 12.8 | 0 | - |
| HCM Lane LOS | F | - | - | D | D | B | A | - |
| HCM 95th %tile Q(veh) | 6.4 | - | - | 1 | 0.2 | 0.2 | - | - |

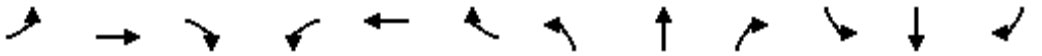
| Intersection | |
|---|---|
| Int Delay, s/veh | 6.3 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 198 | 37 | 81 | 111 | 96 | 189 |
| Future Vol, veh/h | 198 | 37 | 81 | 111 | 96 | 189 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 94 | 94 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 16 | 16 | 1 | 1 |
| Mvmt Flow | 230 | 43 | 86 | 118 | 109 | 215 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 399 | 109 | 324 | 0 | - | 0 |
| Stage 1 | 109 | - | - | - | - | - |
| Stage 2 | 290 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.26 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.344 | - | - | - |
| Pot Cap-1 Maneuver | 607 | 945 | 1161 | - | - | - |
| Stage 1 | 916 | - | - | - | - | - |
| Stage 2 | 759 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 559 | 945 | 1161 | - | - | - |
| Mov Cap-2 Maneuver | 559 | - | - | - | - | - |
| Stage 1 | 844 | - | - | - | - | - |
| Stage 2 | 759 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 16 | 3.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1161 | - | 597 | - | - |
| HCM Lane V/C Ratio | 0.074 | - | 0.458 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | 16 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 2.4 | - | - |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 38 | 658 | 37 | 105 | 1119 | 528 | 106 | 128 | 189 | 508 | 106 | 110 |
| Future Volume (veh/h) | 38 | 658 | 37 | 105 | 1119 | 528 | 106 | 128 | 189 | 508 | 106 | 110 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 40 | 693 | 0 | 112 | 1190 | 0 | 141 | 171 | 0 | 612 | 128 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 | 0.75 | 0.75 | 0.75 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 |
| Cap, veh/h | 53 | 1583 | | 137 | 915 | | 159 | 372 | | 433 | 443 | |
| Arrive On Green | 0.03 | 0.45 | 0.00 | 0.08 | 0.50 | 0.00 | 0.09 | 0.20 | 0.00 | 0.13 | 0.24 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 40 | 693 | 0 | 112 | 1190 | 0 | 141 | 171 | 0 | 612 | 128 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 2.8 | 16.7 | 0.0 | 7.8 | 61.5 | 0.0 | 9.8 | 10.1 | 0.0 | 15.5 | 6.9 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 16.7 | 0.0 | 7.8 | 61.5 | 0.0 | 9.8 | 10.1 | 0.0 | 15.5 | 6.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 53 | 1583 | | 137 | 915 | | 159 | 372 | | 433 | 443 | |
| V/C Ratio(X) | 0.75 | 0.44 | | 0.82 | 1.30 | | 0.89 | 0.46 | | 1.41 | 0.29 | |
| Avail Cap(c_a), veh/h | 71 | 1583 | | 222 | 915 | | 159 | 372 | | 433 | 443 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 59.5 | 23.4 | 0.0 | 56.1 | 31.1 | 0.0 | 55.7 | 43.4 | 0.0 | 54.1 | 38.7 | 0.0 |
| Incr Delay (d2), s/veh | 25.6 | 0.9 | 0.0 | 11.4 | 143.4 | 0.0 | 41.1 | 4.1 | 0.0 | 199.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.6 | 6.9 | 0.0 | 3.8 | 61.8 | 0.0 | 6.1 | 5.0 | 0.0 | 18.6 | 3.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 85.1 | 24.3 | 0.0 | 67.5 | 174.5 | 0.0 | 96.7 | 47.5 | 0.0 | 253.6 | 40.3 | 0.0 |
| LnGrp LOS | F | C | | E | F | | F | D | | F | D | |
| Approach Vol, veh/h | | 733 | A | | 1302 | A | | 312 | A | | 740 | A |
| Approach Delay, s/veh | | 27.6 | | | 165.3 | | | 69.7 | | | 216.7 | |
| Approach LOS | | C | | | F | | | E | | | F | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.2 | 60.1 | 20.0 | 29.5 | 8.2 | 66.0 | 15.7 | 33.8 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 15.7 | 50.8 | 15.5 | 25.0 | 5.0 | 61.5 | 11.2 | 29.3 |
| Max Q Clear Time (g_c+I1), s | 9.8 | 18.7 | 17.5 | 12.1 | 4.8 | 63.5 | 11.8 | 8.9 |
| Green Ext Time (p_c), s | 0.1 | 4.9 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.5 |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 135.2 |
| HCM 6th LOS | | F |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 60 | 108 | 75 | 216 | 86 | 8 |
| Future Vol, veh/h | 60 | 108 | 75 | 216 | 86 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 53 | 53 | 74 | 74 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 2 | 2 |
| Mvmt Flow | 113 | 204 | 101 | 292 | 106 | 10 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 393 | 0 | - | 0 | 677 | 247 |
| Stage 1 | - | - | - | - | 247 | - |
| Stage 2 | - | - | - | - | 430 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1177 | - | - | - | 418 | 792 |
| Stage 1 | - | - | - | - | 794 | - |
| Stage 2 | - | - | - | - | 656 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1177 | - | - | - | 373 | 792 |
| Mov Cap-2 Maneuver | - | - | - | - | 373 | - |
| Stage 1 | - | - | - | - | 708 | - |
| Stage 2 | - | - | - | - | 656 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 3 | 0 | 18 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1177 | - | - | - | 391 |
| HCM Lane V/C Ratio | 0.096 | - | - | - | 0.297 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 18 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 1.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 291 | 0 | 0 | 198 |
| Future Vol, veh/h | 0 | 0 | 291 | 0 | 0 | 198 |
| 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 | 0 | 0 | 316 | 0 | 0 | 215 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 531 | 316 | 0 | 0 | 316 | 0 |
| Stage 1 | 316 | - | - | - | - | - |
| Stage 2 | 215 | - | - | - | - | - |
| 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 | 509 | 724 | - | - | 1244 | - |
| Stage 1 | 739 | - | - | - | - | - |
| Stage 2 | 821 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 509 | 724 | - | - | 1244 | - |
| Mov Cap-2 Maneuver | 509 | - | - | - | - | - |
| Stage 1 | 739 | - | - | - | - | - |
| Stage 2 | 821 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1244 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | - | - | 0 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 7.3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 3 | 0 | 141 | 0 | 2 | 17 | 143 | 1765 | 0 | 7 | 1340 | 7 |
| Future Vol, veh/h | 3 | 0 | 141 | 0 | 2 | 17 | 143 | 1765 | 0 | 7 | 1340 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 69 | 69 | 69 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 5 | 0 | 235 | 0 | 3 | 25 | 152 | 1878 | 0 | 8 | 1523 | 8 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3735 | 3721 | 762 | 2960 | 3729 | 1878 | 1531 | 0 | 0 | 1878 | 0 | 0 |
| Stage 1 | 1539 | 1539 | - | 2182 | 2182 | - | - | - | - | - | - | - |
| Stage 2 | 2196 | 2182 | - | 778 | 1547 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | ~ 2 | 5 | 352 | 8 | 5 | 90 | 425 | - | - | 314 | - | - |
| Stage 1 | 123 | 179 | - | 61 | 85 | - | - | - | - | - | - | - |
| Stage 2 | 60 | 85 | - | 360 | 177 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 0 | 3 | 352 | 2 | 3 | 90 | 425 | - | - | 314 | - | - |
| Mov Cap-2 Maneuver | 0 | 3 | - | 2 | 3 | - | - | - | - | - | - | - |
| Stage 1 | 79 | 148 | - | 39 | 55 | - | - | - | - | - | - | - |
| Stage 2 | 27 | 55 | - | 99 | 147 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 34.5 | $ 534.1 | 1.4 | 1.5 |
| HCM LOS | D | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 425 | - | - | 352 | 22 | 314 | - | - |
| HCM Lane V/C Ratio | 0.358 | - | - | 0.682 | 1.252 | 0.025 | - | - |
| HCM Control Delay (s) | 18.1 | - | - | 34.5 | $ 534.1 | 16.8 | 1.4 | - |
| HCM Lane LOS | C | - | - | D | F | C | A | - |
| HCM 95th %tile Q(veh) | 1.6 | - | - | 4.8 | 3.6 | 0.1 | - | - |

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 22.1 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 257 | 45 | 110 | 166 | 51 | 193 |
| Future Vol, veh/h | 257 | 45 | 110 | 166 | 51 | 193 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 59 | 59 | 85 | 85 |
| Heavy Vehicles, % | 1 | 1 | 4 | 4 | 1 | 1 |
| Mvmt Flow | 292 | 51 | 186 | 281 | 60 | 227 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 713 | 60 | 287 | 0 | - | 0 |
| Stage 1 | 60 | - | - | - | - | - |
| Stage 2 | 653 | - | - | - | - | - |
| Critical Hdwy | 6.41 | 6.21 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.41 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.41 | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 3.309 | 2.236 | - | - | - |
| Pot Cap-1 Maneuver | 400 | 1008 | 1264 | - | - | - |
| Stage 1 | 965 | - | - | - | - | - |
| Stage 2 | 520 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 330 | 1008 | 1264 | - | - | - |
| Mov Cap-2 Maneuver | 330 | - | - | - | - | - |
| Stage 1 | 797 | - | - | - | - | - |
| Stage 2 | 520 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 66.1 | 3.3 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1264 | - | 367 | - | - |
| HCM Lane V/C Ratio | 0.148 | - | 0.935 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | 66.1 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 10 | - | - |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 56 | 1229 | 93 | 81 | 546 | 447 | 78 | 131 | 132 | 536 | 130 | 55 |
| Future Volume (veh/h) | 56 | 1229 | 93 | 81 | 546 | 447 | 78 | 131 | 132 | 536 | 130 | 55 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1856 | 1856 | 1856 | 1752 | 1752 | 1752 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 64 | 1397 | 0 | 100 | 674 | 0 | 89 | 149 | 0 | 638 | 155 | 0 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.81 | 0.81 | 0.81 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 2 | 2 | 2 |
| Cap, veh/h | 79 | 1430 | | 110 | 785 | | 110 | 350 | | 650 | 602 | |
| Arrive On Green | 0.04 | 0.41 | 0.00 | 0.06 | 0.42 | 0.00 | 0.07 | 0.20 | 0.00 | 0.19 | 0.32 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 64 | 1397 | 0 | 100 | 674 | 0 | 89 | 149 | 0 | 638 | 155 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1767 | 1856 | 1572 | 1668 | 1752 | 1485 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 4.5 | 48.8 | 0.0 | 7.0 | 41.1 | 0.0 | 6.6 | 9.3 | 0.0 | 23.0 | 7.7 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 48.8 | 0.0 | 7.0 | 41.1 | 0.0 | 6.6 | 9.3 | 0.0 | 23.0 | 7.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 79 | 1430 | | 110 | 785 | | 110 | 350 | | 650 | 602 | |
| V/C Ratio(X) | 0.81 | 0.98 | | 0.91 | 0.86 | | 0.81 | 0.43 | | 0.98 | 0.26 | |
| Avail Cap(c_a), veh/h | 79 | 1430 | | 110 | 785 | | 184 | 350 | | 650 | 602 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 59.2 | 36.6 | 0.0 | 58.2 | 32.7 | 0.0 | 57.6 | 43.7 | 0.0 | 50.5 | 31.3 | 0.0 |
| Incr Delay (d2), s/veh | 44.3 | 18.9 | 0.0 | 57.3 | 11.7 | 0.0 | 12.9 | 3.7 | 0.0 | 30.7 | 1.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 23.8 | 0.0 | 4.9 | 20.2 | 0.0 | 3.1 | 4.3 | 0.0 | 12.5 | 3.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 103.5 | 55.5 | 0.0 | 115.6 | 44.4 | 0.0 | 70.5 | 47.5 | 0.0 | 81.2 | 32.4 | 0.0 |
| LnGrp LOS | F | E | | F | D | | E | D | | F | C | |
| Approach Vol, veh/h | | 1461 | A | | 774 | A | | 238 | A | | 793 | A |
| Approach Delay, s/veh | | 57.6 | | | 53.6 | | | 56.1 | | | 71.7 | |
| Approach LOS | | E | | | D | | | E | | | E | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 12.3 | 55.2 | 28.0 | 29.5 | 10.1 | 57.4 | 12.8 | 44.7 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 7.8 | 50.7 | 23.5 | 25.0 | 5.6 | 52.9 | 13.8 | 34.7 |
| Max Q Clear Time (g_c+I1), s | 9.0 | 50.8 | 25.0 | 11.3 | 6.5 | 43.1 | 8.6 | 9.7 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 3.0 | 0.1 | 0.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 59.9 |
| HCM 6th LOS | E |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 22 | 149 | 69 | 169 | 121 | 35 |
| Future Vol, veh/h | 22 | 149 | 69 | 169 | 121 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 54 | 54 | 91 | 91 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 13 | 13 | 3 | 3 |
| Mvmt Flow | 41 | 276 | 76 | 186 | 157 | 45 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 262 | 0 | - | 0 | 527 | 169 |
| Stage 1 | - | - | - | - | 169 | - |
| Stage 2 | - | - | - | - | 358 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.43 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.527 | 3.327 |
| Pot Cap-1 Maneuver | 1314 | - | - | - | 510 | 872 |
| Stage 1 | - | - | - | - | 858 | - |
| Stage 2 | - | - | - | - | 705 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1314 | - | - | - | 491 | 872 |
| Mov Cap-2 Maneuver | - | - | - | - | 491 | - |
| Stage 1 | - | - | - | - | 826 | - |
| Stage 2 | - | - | - | - | 705 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1 | 0 | 15.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1314 | - | - | - | 544 |
| HCM Lane V/C Ratio | 0.031 | - | - | - | 0.372 |
| HCM Control Delay (s) | 7.8 | 0 | - | - | 15.5 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.7 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 6.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 59 | 0 | 0 | 10 | 197 | 1092 | 2 | 32 | 1870 | 5 |
| Future Vol, veh/h | 0 | 0 | 59 | 0 | 0 | 10 | 197 | 1092 | 2 | 32 | 1870 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | 50 | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 64 | 64 | 64 | 75 | 75 | 75 | 80 | 80 | 80 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 0 | 0 | 92 | 0 | 0 | 13 | 246 | 1365 | 3 | 35 | 2055 | 5 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3990 | 3985 | 1028 | 2957 | 3989 | 1367 | 2060 | 0 | 0 | 1368 | 0 | 0 |
| Stage 1 | 2125 | 2125 | - | 1859 | 1859 | - | - | - | - | - | - | - |
| Stage 2 | 1865 | 1860 | - | 1098 | 2130 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | 1 | 3 | 235 | 8 | 3 | 182 | 264 | - | - | 496 | - | - |
| Stage 1 | 52 | 91 | - | 95 | 124 | - | - | - | - | - | - | - |
| Stage 2 | 95 | 124 | - | 230 | 91 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 0 | 0 | 235 | 1 | 0 | 182 | 264 | - | - | 496 | - | - |
| Mov Cap-2 Maneuver | 0 | 0 | - | 1 | 0 | - | - | - | - | - | - | - |
| Stage 1 | 4 | 85 | - | 6 | 8 | - | - | - | - | - | - | - |
| Stage 2 | 6 | 8 | - | 130 | 85 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 29.9 | 26.3 | 12.3 | 0.2 |
| HCM LOS | D | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 264 | - | - | 235 | 182 | 496 | - | - |
| HCM Lane V/C Ratio | 0.933 | - | - | 0.392 | 0.073 | 0.071 | - | - |
| HCM Control Delay (s) | 80.7 | - | - | 29.9 | 26.3 | 12.8 | - | - |
| HCM Lane LOS | F | - | - | D | D | B | - | - |
| HCM 95th %tile Q(veh) | 8.6 | - | - | 1.8 | 0.2 | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 7.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | | ↱ | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 198 | 0 | 37 | 0 | 0 | 32 | 81 | 111 | 0 | 0 | 120 | 189 |
| Future Vol, veh/h | 198 | 0 | 37 | 0 | 0 | 32 | 81 | 111 | 0 | 0 | 120 | 189 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 92 | 92 | 92 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 0 | 0 | 0 | 16 | 16 | 16 | 1 | 1 | 1 |
| Mvmt Flow | 230 | 0 | 43 | 0 | 0 | 35 | 86 | 118 | 0 | 0 | 136 | 215 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 444 | 426 | 136 | - | - | 118 | 351 | 0 | 0 | - | - | 0 |
| Stage 1 | 136 | 136 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 308 | 290 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | - | - | 6.2 | 4.26 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | - | - | 3.3 | 2.344 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 524 | 520 | 913 | 0 | 0 | 939 | 1134 | - | - | 0 | - | - |
| Stage 1 | 867 | 784 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | 702 | 672 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 473 | 478 | 913 | - | - | 939 | 1134 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 473 | 478 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | 797 | 784 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 621 | 618 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 19.8 | 9 | 3.6 | 0 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1134 | - | - | 512 | 939 | - | - |
| HCM Lane V/C Ratio | 0.076 | - | - | 0.534 | 0.037 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | - | 19.8 | 9 | - | - |
| HCM Lane LOS | A | A | - | C | A | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 3.1 | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.7 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 3 | 232 | 3 | 28 | 241 |
| Future Vol, veh/h | 6 | 3 | 232 | 3 | 28 | 241 |
| 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 | 95 | 95 | 62 | 62 |
| Heavy Vehicles, % | 2 | 2 | 14 | 14 | 1 | 1 |
| Mvmt Flow | 7 | 3 | 244 | 3 | 45 | 389 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 725 | 246 | 0 | 0 | 247 | 0 |
| Stage 1 | 246 | - | - | - | - | - |
| Stage 2 | 479 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 392 | 793 | - | - | 1325 | - |
| Stage 1 | 795 | - | - | - | - | - |
| Stage 2 | 623 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 375 | 793 | - | - | 1325 | - |
| Mov Cap-2 Maneuver | 375 | - | - | - | - | - |
| Stage 1 | 795 | - | - | - | - | - |
| Stage 2 | 596 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 13.1 | 0 | 0.8 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 455 | 1325 | - |
| HCM Lane V/C Ratio | - | - | 0.022 | 0.034 | - |
| HCM Control Delay (s) | - | - | 13.1 | 7.8 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0.1 | - |

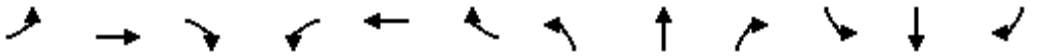
| Intersection | |
|---|---|
| Int Delay, s/veh | 1.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 35 | 2 | 18 | 204 | 25 | 1 | 0 | 6 | 18 | 0 | 0 |
| Future Vol, veh/h | 0 | 35 | 2 | 18 | 204 | 25 | 1 | 0 | 6 | 18 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 38 | 2 | 20 | 222 | 27 | 1 | 0 | 7 | 20 | 0 | 0 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 249 | 0 | 0 | 40 | 0 | 0 | 315 | 328 | 39 | 319 | 316 | 236 |
| Stage 1 | - | - | - | - | - | - | 39 | 39 | - | 276 | 276 | - |
| Stage 2 | - | - | - | - | - | - | 276 | 289 | - | 43 | 40 | - |
| Critical Hdwy | 4.1 | - | - | 4.14 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.236 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1328 | - | - | 1557 | - | - | 638 | 591 | 1033 | 634 | 600 | 803 |
| Stage 1 | - | - | - | - | - | - | 976 | 862 | - | 730 | 682 | - |
| Stage 2 | - | - | - | - | - | - | 730 | 673 | - | 971 | 862 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1328 | - | - | 1557 | - | - | 631 | 582 | 1033 | 623 | 591 | 803 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 631 | 582 | - | 623 | 591 | - |
| Stage 1 | - | - | - | - | - | - | 976 | 862 | - | 730 | 672 | - |
| Stage 2 | - | - | - | - | - | - | 719 | 663 | - | 965 | 862 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 0.5 | 8.8 | 11 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 947 | 1328 | - | - | 1557 | - | - | 623 |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.013 | - | - | 0.031 |
| HCM Control Delay (s) | 8.8 | 0 | - | - | 7.3 | 0 | - | 11 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 38 | 658 | 47 | 107 | 1119 | 528 | 113 | 133 | 194 | 508 | 114 | 110 |
| Future Volume (veh/h) | 38 | 658 | 47 | 107 | 1119 | 528 | 113 | 133 | 194 | 508 | 114 | 110 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1856 | 1856 | 1856 | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 40 | 693 | 0 | 114 | 1190 | 0 | 151 | 177 | 0 | 612 | 137 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.94 | 0.94 | 0.94 | 0.75 | 0.75 | 0.75 | 0.83 | 0.83 | 0.83 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 |
| Cap, veh/h | 53 | 1578 | | 139 | 915 | | 176 | 372 | | 433 | 424 | |
| Arrive On Green | 0.03 | 0.45 | 0.00 | 0.08 | 0.50 | 0.00 | 0.10 | 0.20 | 0.00 | 0.13 | 0.23 | 0.00 |
| Sat Flow, veh/h | 1767 | 3526 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 3456 | 1870 | 1585 |
| Grp Volume(v), veh/h | 40 | 693 | 0 | 114 | 1190 | 0 | 151 | 177 | 0 | 612 | 137 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1767 | 1763 | 1572 | 1753 | 1841 | 1560 | 1753 | 1841 | 1560 | 1728 | 1870 | 1585 |
| Q Serve(g_s), s | 2.8 | 16.7 | 0.0 | 7.9 | 61.5 | 0.0 | 10.5 | 10.5 | 0.0 | 15.5 | 7.6 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 16.7 | 0.0 | 7.9 | 61.5 | 0.0 | 10.5 | 10.5 | 0.0 | 15.5 | 7.6 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 53 | 1578 | | 139 | 915 | | 176 | 372 | | 433 | 424 | |
| V/C Ratio(X) | 0.75 | 0.44 | | 0.82 | 1.30 | | 0.86 | 0.48 | | 1.41 | 0.32 | |
| Avail Cap(c_a), veh/h | 71 | 1578 | | 227 | 915 | | 180 | 372 | | 433 | 424 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 59.5 | 23.5 | 0.0 | 56.1 | 31.1 | 0.0 | 54.8 | 43.6 | 0.0 | 54.1 | 39.9 | 0.0 |
| Incr Delay (d2), s/veh | 25.6 | 0.9 | 0.0 | 11.2 | 143.4 | 0.0 | 31.0 | 4.3 | 0.0 | 199.5 | 2.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.6 | 6.9 | 0.0 | 3.9 | 61.8 | 0.0 | 6.1 | 5.2 | 0.0 | 18.6 | 3.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 85.1 | 24.4 | 0.0 | 67.3 | 174.5 | 0.0 | 85.8 | 47.9 | 0.0 | 253.6 | 41.9 | 0.0 |
| LnGrp LOS | F | C | | E | F | | F | D | | F | D | |
| Approach Vol, veh/h | | 733 | A | | 1304 | A | | 328 | A | | 749 | A |
| Approach Delay, s/veh | | 27.7 | | | 165.1 | | | 65.3 | | | 214.9 | |
| Approach LOS | | C | | | F | | | E | | | F | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 14.3 | 59.9 | 20.0 | 29.5 | 8.2 | 66.0 | 16.9 | 32.6 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 16.0 | 50.5 | 15.5 | 25.0 | 5.0 | 61.5 | 12.7 | 27.8 |
| Max Q Clear Time (g_c+I1), s | 9.9 | 18.7 | 17.5 | 12.5 | 4.8 | 63.5 | 12.5 | 9.6 |
| Green Ext Time (p_c), s | 0.1 | 4.9 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 134.2 |
| HCM 6th LOS | F |

**Notes**

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 60 | 110 | 76 | 216 | 107 | 8 |
| Future Vol, veh/h | 60 | 110 | 76 | 216 | 107 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 53 | 53 | 74 | 74 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 4 | 4 | 2 | 2 |
| Mvmt Flow | 113 | 208 | 103 | 292 | 132 | 10 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 395 | 0 | - | 0 | 683 | 249 |
| Stage 1 | - | - | - | - | 249 | - |
| Stage 2 | - | - | - | - | 434 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1175 | - | - | - | 415 | 790 |
| Stage 1 | - | - | - | - | 792 | - |
| Stage 2 | - | - | - | - | 653 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1175 | - | - | - | 370 | 790 |
| Mov Cap-2 Maneuver | - | - | - | - | 370 | - |
| Stage 1 | - | - | - | - | 706 | - |
| Stage 2 | - | - | - | - | 653 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 3 | 0 | 19.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1175 | - | - | - | 384 |
| HCM Lane V/C Ratio | 0.096 | - | - | - | 0.37 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 19.8 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - | 1.7 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 6.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 3 | 0 | 152 | 0 | 2 | 17 | 165 | 1767 | 0 | 7 | 1345 | 7 |
| Future Vol, veh/h | 3 | 0 | 152 | 0 | 2 | 17 | 165 | 1767 | 0 | 7 | 1345 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 50 | - | - | 50 | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 60 | 60 | 60 | 69 | 69 | 69 | 94 | 94 | 94 | 88 | 88 | 88 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 3 | 3 | 3 |
| Mvmt Flow | 5 | 0 | 253 | 0 | 3 | 25 | 176 | 1880 | 0 | 8 | 1528 | 8 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 3790 | 3776 | 764 | 3012 | 3784 | 1880 | 1536 | 0 | 0 | 1880 | 0 | 0 |
| Stage 1 | 1544 | 1544 | - | 2232 | 2232 | - | - | - | - | - | - | - |
| Stage 2 | 2246 | 2232 | - | 780 | 1552 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.3 | 6.5 | 6.9 | 7.3 | 6.5 | 6.2 | 4.16 | - | - | 4.145 | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | 6.1 | 5.5 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.1 | 5.5 | - | 6.5 | 5.5 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 | 2.238 | - | - | 2.2285 | - | - |
| Pot Cap-1 Maneuver | ~ 2 | 4 | 351 | 7 | 4 | 90 | 423 | - | - | 314 | - | - |
| Stage 1 | 122 | 178 | - | 57 | 80 | - | - | - | - | - | - | - |
| Stage 2 | 56 | 80 | - | 359 | 176 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | - | 2 | 351 | 1 | ~ 2 | 90 | 423 | - | - | 314 | - | - |
| Mov Cap-2 Maneuver | - | 2 | - | 1 | ~ 2 | - | - | - | - | - | - | - |
| Stage 1 | 71 | 174 | - | 33 | 47 | - | - | - | - | - | - | - |
| Stage 2 | 22 | 47 | - | 97 | 172 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | | $ 840.1 | 1.7 | 0.1 |
| HCM LOS | - | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 423 | - | - | - | 16 | 314 | - | - |
| HCM Lane V/C Ratio | 0.415 | - | - | - | 1.721 | 0.025 | - | - |
| HCM Control Delay (s) | 19.4 | - | - | - | $ 840.1 | 16.8 | - | - |
| HCM Lane LOS | C | - | - | - | F | C | - | - |
| HCM 95th %tile Q(veh) | 2 | - | - | - | 4 | 0.1 | - | - |

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 37 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | | ↱ | | ↕ | | | ↑ | ↱ |
| Traffic Vol, veh/h | 257 | 0 | 45 | 0 | 0 | 16 | 110 | 166 | 0 | 0 | 72 | 193 |
| Future Vol, veh/h | 257 | 0 | 45 | 0 | 0 | 16 | 110 | 166 | 0 | 0 | 72 | 193 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 92 | 92 | 92 | 59 | 59 | 59 | 85 | 85 | 85 |
| Heavy Vehicles, % | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 4 | 4 | 1 | 1 | 1 |
| Mvmt Flow | 292 | 0 | 51 | 0 | 0 | 17 | 186 | 281 | 0 | 0 | 85 | 227 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 747 | 738 | 85 | - | - | 281 | 312 | 0 | 0 | - | - | 0 |
| Stage 1 | 85 | 85 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 662 | 653 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | - | - | 6.2 | 4.14 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | - | - | 3.3 | 2.236 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 330 | 347 | 977 | 0 | 0 | 763 | 1237 | - | - | 0 | - | - |
| Stage 1 | 925 | 826 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | 453 | 465 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | ~ 279 | 285 | 977 | - | - | 763 | 1237 | - | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 279 | 285 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | 760 | 826 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 364 | 382 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 117.9 | 9.8 | 3.4 | 0 |
| HCM LOS | F | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1237 | - | - | 312 | 763 | - | - |
| HCM Lane V/C Ratio | 0.151 | - | - | 1.1 | 0.023 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | - | 117.9 | 9.8 | - | - |
| HCM Lane LOS | A | A | - | F | A | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 13.5 | 0.1 | - | - |

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 2 | 291 | 2 | 23 | 198 |
| Future Vol, veh/h | 3 | 2 | 291 | 2 | 23 | 198 |
| 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 | 79 | 79 | 74 | 74 |
| Heavy Vehicles, % | 2 | 2 | 4 | 4 | 1 | 1 |
| Mvmt Flow | 3 | 2 | 368 | 3 | 31 | 268 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 700 | 370 | 0 | 0 | 371 | 0 |
| Stage 1 | 370 | - | - | - | - | - |
| Stage 2 | 330 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.11 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.209 | - |
| Pot Cap-1 Maneuver | 405 | 676 | - | - | 1193 | - |
| Stage 1 | 699 | - | - | - | - | - |
| Stage 2 | 728 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 392 | 676 | - | - | 1193 | - |
| Mov Cap-2 Maneuver | 392 | - | - | - | - | - |
| Stage 1 | 699 | - | - | - | - | - |
| Stage 2 | 705 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 12.7 | 0 | 0.8 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 471 | 1193 | - |
| HCM Lane V/C Ratio | - | - | 0.012 | 0.026 | - |
| HCM Control Delay (s) | - | - | 12.7 | 8.1 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 120 | 2 | 17 | 151 | 22 | 3 | 0 | 26 | 9 | 0 | 0 |
| Future Vol, veh/h | 0 | 120 | 2 | 17 | 151 | 22 | 3 | 0 | 26 | 9 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 130 | 2 | 18 | 164 | 24 | 3 | 0 | 28 | 10 | 0 | 0 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 188 | 0 | 0 | 132 | 0 | 0 | 343 | 355 | 131 | 357 | 344 | 176 |
| Stage 1 | - | - | - | - | - | - | 131 | 131 | - | 212 | 212 | - |
| Stage 2 | - | - | - | - | - | - | 212 | 224 | - | 145 | 132 | - |
| Critical Hdwy | 4.1 | - | - | 4.14 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.236 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1398 | - | - | 1441 | - | - | 611 | 571 | 919 | 598 | 579 | 867 |
| Stage 1 | - | - | - | - | - | - | 873 | 788 | - | 790 | 727 | - |
| Stage 2 | - | - | - | - | - | - | 790 | 718 | - | 858 | 787 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1398 | - | - | 1441 | - | - | 604 | 563 | 919 | 573 | 571 | 867 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 604 | 563 | - | 573 | 571 | - |
| Stage 1 | - | - | - | - | - | - | 873 | 788 | - | 790 | 717 | - |
| Stage 2 | - | - | - | - | - | - | 779 | 708 | - | 832 | 787 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 0.7 | 9.3 | 11.4 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 872 | 1398 | - | - | 1441 | - | - | 573 |
| HCM Lane V/C Ratio | 0.036 | - | - | - | 0.013 | - | - | 0.017 |
| HCM Control Delay (s) | 9.3 | 0 | - | - | 7.5 | 0 | - | 11.4 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0.1 |