### TRAFFIC IMPACT ANALYSIS

## **CASTLE ROCK HYUNDAI**

CASTLE ROCK, COLORADO



CASTLE ROCK HYUNDAI TRAFFIC IMPACT ANALYSIS **EXECUTIVE SUMMARY** 

#### Introduction

The proposed Castle Rock Hyundai development is located east of S. Wilcox Street and south of Brookside Circle in Castle Rock, Colorado.

#### **Land Use and Access**

The site is proposed to include a car dealership with about 32,826 square feet. Three-quarter movement access is proposed to S. Wilcox Street as shown in the conceptual site plan in Figure 2. There is also a proposed cross-access to the north to allow use of the existing Castle Rock Ford full movement access.

#### **Trip Generation**

The site is projected to generate about 914 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 45 vehicles would enter and about 16 vehicles would exit the site. During the afternoon peak-hour, about 32 vehicles would enter and about 48 vehicles would exit.

#### **Projected Levels of Service**

All movements at the unsignalized intersections analyzed are expected to operate at LOS "D" or better through 2043.

#### **Recommended Improvements**

The recommended improvements are shown in Figures 8, 9, and 10 and detailed in Figure 11 of the TIA. Figure 11 shows a conceptual layout to restripe S. Wilcox Street to the north of the site to repurpose the unwarranted existing right-turn lanes as left-turn lanes which is a more appropriate use for the existing roadway. Coordination will be needed with the Town to determine if a reduced posted speed limit of 40 mph is appropriate as it would considerably reduce the length of the recommended improvements in Figure 11.

#### Summary

The impact of the site can be accommodated by the existing and planned roadway network with implementation of the recommended improvements.

#### LSC TRANSPORTATION CONSULTANTS, INC.



1889 York Street Denver, CO 80206 (303) 333-1105 FAX (303) 333-1107 E-mail: lsc@lscdenver.com

July 10, 2024

Mr. Casey Adragna Adragna Architecture + Development 6162 W. Cross Drive Littleton, CO 80123

> Re: Castle Rock Hyundai Castle Rock, CO LSC #230640

Dear Mr. Adragna:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Castle Rock Hyundai development to address Town comments. As shown on Figure 1, the site is located east of S. Wilcox Street and south of Brookside Circle in Castle Rock, Colorado.

#### REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the growth in background traffic or the impact of the site.

#### LAND USE AND ACCESS

The site is proposed to include a car dealership with about 32,826 square feet. Three-quarter movement access is proposed to S. Wilcox Street as shown in the conceptual site plan in Figure 2. There is also a proposed cross-access to the north to allow use of the existing Castle Rock Ford full movement access.

#### ROADWAY AND TRAFFIC CONDITIONS

#### **Area Roadways**

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **S. Wilcox Street** is a north-south, two-lane minor arterial roadway west of the site. The intersection with E. Plum Creek Parkway is signalized with auxiliary turn lanes and the intersections with Brookside Circle and the Castle Rock Ford Access are stop-sign controlled. The posted speed limit is 45 mph in the vicinity of the site and decreases to 35 mph to the north.
- **Brookside Circle** is a two-lane local roadway providing access to S. Wilcox Street for the area north of the site.

#### **Existing Traffic Conditions**

Figure 3 shows the existing traffic volumes, lane geometry, and traffic control in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes and average daily traffic volumes are from the attached traffic counts conducted in August, 2023 by Counter Measures, Inc.

#### 2026 and 2043 Background Traffic

Figure 4a shows the estimated 2026 pre CRV interchange background traffic assuming the I-25/CVR interchange is not yet open to traffic and a two percent annual growth rate. It also assumes the proposed developments at 1100 S. Wilcox (September, 2021 TIA - Phase 1 by LSC) and the expansion of the Castle Rock Ford Site (March, 2023 Trip Generation Letter by LSC) are completed.

Figure 4b shows the estimated 2026 post CVR interchange background traffic assuming the I-25/CVR interchange is open to traffic with the through volumes being 80 percent of those in Figure 5. It also assumes the proposed developments at 1100 S. Wilcox (September, 2021 TIA - Phase 1 by LSC) and the expansion of the Castle Rock Ford Site (March, 2023 Trip Generation Letter by LSC) are completed.

Figure 5 shows the estimated 2043 background traffic assuming the I-25/CVR interchange is completed. The daily traffic volume of 11,615 vpd is the Town's long-term projection with the CVR interchange in place less site-generated trips. It also assumes peak-hour volumes are ten percent of the daily volume.

#### Existing, 2026, and 2043 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for unsignalized intersections.

The intersections in Figures 3, 4, and 5 were analyzed to determine the existing, 2026, and 2043 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

1. **S. Wilcox Street/Castle Rock Ford Access:** All movements at this unsignalized intersection currently operate at LOS "C" or better during both morning and afternoon peak-hours

and are expected to operate at LOS "D" or better through 2043 before and after construction of the I-25/CVR interchange.

**2. S. Wilcox Street/Proposed Site Access:** This intersection was analyzed only in the total traffic scenarios.

#### TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation*, 11<sup>th</sup> Edition, 2021 by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 914 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 45 vehicles would enter and about 16 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 32 vehicles would enter and about 48 vehicles would exit.

#### TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of the site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, and activity centers; and the site's proposed land use.

#### TRIP ASSIGNMENT

Figure 7 shows the estimated assignment of site-generated traffic volumes based on the directional distribution percentages (from Figure 6) and the trip generation estimate (from Table 2).

#### 2026 AND 2043 TOTAL TRAFFIC

Figure 8 shows the 2026 pre CVR interchange total traffic which is the sum of the 2026 pre CVR background traffic volumes (from Figure 4a) and the site-generated traffic volumes (from Figure 7). Figure 8 also shows the recommended 2026 lane geometry and traffic control.

Figure 9 shows the 2026 post CVR interchange total traffic which is the sum of the 2026 post CVR background traffic volumes (from Figure 4b) and the site-generated traffic volumes (from Figure 7). Figure 9 also shows the recommended 2026 lane geometry and traffic control.

Figure 10 shows the 2043 total traffic which is the sum of the 2043 background traffic volumes (from Figure 5) and the site-generated traffic volumes (from Figure 7). Figure 10 also shows the recommended 2043 lane geometry and traffic control.

#### PROJECTED LEVELS OF SERVICE

The intersections in Figures 8 through 10 were analyzed to determine the 2026 and 2043 total traffic levels of service. Table 1 shows the level of service analysis results.

- 1. **S. Wilcox Street/Castle Rock Ford Access:** All movements at this unsignalized intersection are expected to operate at LOS "D" or better during both morning and afternoon peakhours through 2026 without the CVR interchange and at LOS "C" or better in 2026 or 2043 with the CVR interchange.
- 2. S. Wilcox Street/Proposed Site Access: All movements at this unsignalized three-quarter movement intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2043.

#### RECOMMENDED IMPROVEMENTS

The recommended improvements are shown in Figures 8, 9, and 10 and detailed in Figure 11. Figure 11 shows a conceptual layout to restripe S. Wilcox Street to the north of the site to repurpose the unwarranted existing right-turn lanes as left-turn lanes which is a more appropriate use for the existing roadway. Coordination will be needed with the Town to determine if a reduced posted speed limit of 40 mph is appropriate as it would considerably reduce the length of the recommended improvements in Figure 11.

#### **CONCLUSIONS AND RECOMMENDATIONS**

#### **Trip Generation**

1. The site is projected to generate about 914 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peakhour, about 45 vehicles would enter and about 16 vehicles would exit the site. During the afternoon peak-hour, about 32 vehicles would enter and about 48 vehicles would exit.

#### **Projected Levels of Service**

2. All movements at the unsignalized intersections analyzed are expected to operate at LOS "D" or better through 2043.

#### **Conclusions**

3. The impact of the site can be accommodated by the existing and planned roadway network with implementation of the recommended improvements.

#### Recommendations

4. The recommended improvements are shown in Figures 8, 9, and 10 and detailed in Figure 11. Figure 11 shows a conceptual layout to restripe S. Wilcox Street to the north of the site to repurpose the unwarranted existing right-turn lanes as left-turn lanes which is a more appropriate use for the existing roadway. Coordination will be needed with the Town to determine if a reduced posted speed limit of 40 mph is appropriate as it would considerably reduce the length of the recommended improvements in Figure 11.

\* \* \* \* \*

We trust our findings will assist you in gaining approval of the Castle Rock Hyundai development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

Ву ///

Christopher & McGranahan Principal/President

CSM/wc

7-10-24

Enclosures: Tables 1 and 2

Figures 1 - 11 Traffic Counts

Level of Service Definitions Level of Service Reports

 $W: LSC \ | \ Castle Rock Hyundai \ | \ Report \ | \ Univ-2024 \ | \ Castle Rock Hyundai-071024. wpd \ | \$ 

# Table 1 Intersection Levels of Service Analysis Castle Rock Hyundai Castle Rock, CO LSC #230640; July, 2024

|  | Traffic             | Existing Level of Service | g Traffic<br>Level of<br>Service | 2026 Bac<br>No Inter<br>Level of<br>Service | _      | 2026 Bac<br>After Inte<br>Level of<br>Service | erchange | No Inte   | Total<br>rchange<br>Level of<br>Service | 2026<br>After Intellevel of<br>Service |           | 2043 Bac<br>Level of<br>Service | ckground<br>Level of<br>Service |           | Total Level of Service |
|--|---------------------|---------------------------|----------------------------------|---|--------|---|----------|-----------|---|--|-----------|---------------------------------|---------------------------------|-----------|------------------------|
| Intersection No. & Location                          | Control             | AM                        | PM                               | AM  | PM     | AM  | PM       | AM        | PM                                      | AM                                     | PM        | AM                              | PM                              | AM        | PM                     |
| S. Wilcox Street/Castle Rock Ford Access     WB Left | TWSC                | С                         | С                                | D   | С      | С   | В        | D         | С                                       | С                                      | С         | С                               | С                               | С         | С                      |
| WB Right<br>SB Left                                  |                     | A<br>B                    | A<br>A                           | A<br>B                                      | A<br>A | A<br>A  | A<br>A   | A<br>B    | A<br>A                                  | A<br>A                                 | A<br>A    | A<br>A                          | A<br>A                          | A<br>A    | A<br>A                 |
| Critical Movement Delay                              |                     | 23.4                      | 17.4                             | 27.4  | 18.7   | 15.9  | 14.4     | 29.3      | 20.3                                    | 16.5                                   | 15.3      | 18.1                            | 16.2                            | 18.4      | 17.4                   |
| 2) S. Wilcox Street/Proposed Site Access             | TWSC                |                           |                                  |   |        |   |          |           |   |  |           |                                 |                                 |           |                        |
| WB Right   | Three-              |                           |                                  |   |        |   |          | С         | В                                       | В                                      | В         |                                 |                                 | В         | В                      |
| SB Left<br>Critical Movement Delay                   | Quarter<br>Movement |                           |                                  |   |        |   |          | B<br>18.1 | A<br>11.9                               | A<br>12.2                              | A<br>10.1 |                                 |                                 | A<br>13.8 | A<br>10.7              |

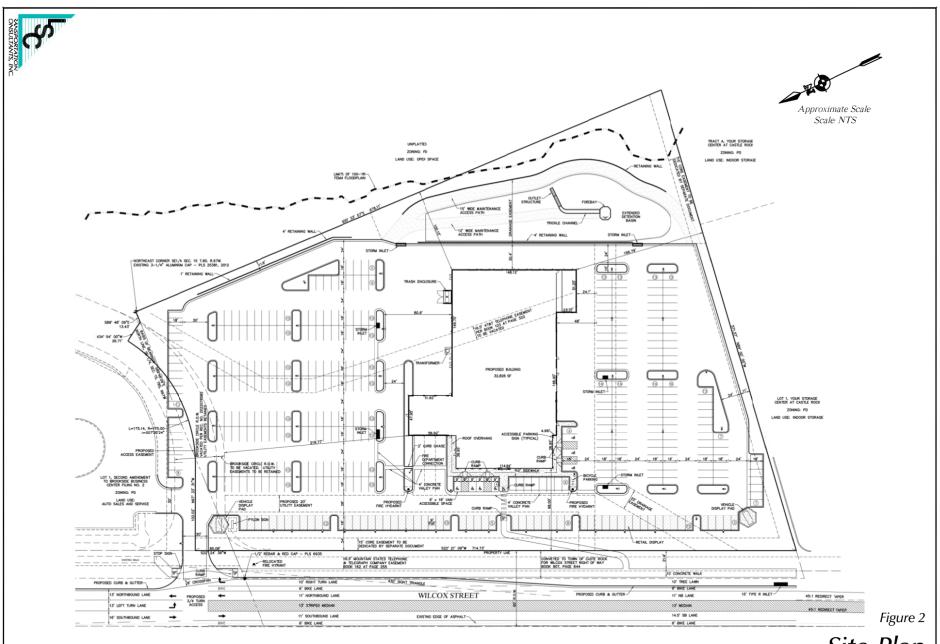
# Table 2 ESTIMATED TRAFFIC GENERATION Castle Rock Hyundai Castle Rock, CO LSC #230640; July, 2024

|  |                                     |         | Trip Gen | eration R | ates <sup>(1)</sup> |         |         | Total Trips | s Gene | rated    |       |
|--|-------------------------------------|---------|----------|-----------|---------------------|---------|---------|-------------|--------|----------|-------|
|  |                                     | Average | AM Pea   | ak-Hour   | PM Pea              | ak-Hour | Average | AM Peak     | -Hour  | PM Peak- | -Hour |
| Trip Generating Category                 | Quantity                            | Weekday | ln       | Out       | ln                  | Out     | Weekday | ln          | Out    | In       | Out   |
| CURRENTLY PROPOSED LA Car Dealership (2) | ND USE<br>32.826 KSF <sup>(3)</sup> | 27.84   | 1.358    | 0.502     | 0.968               | 1.452   | 914     | 45          | 16     | 32       | 48    |

#### Notes:

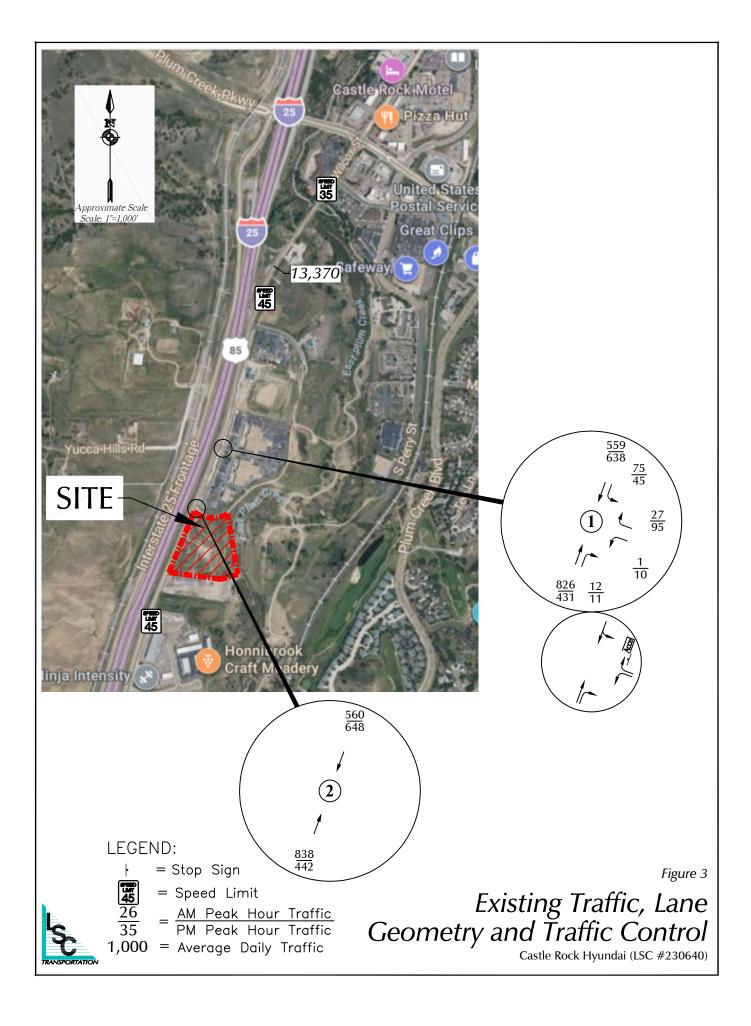
- (1) Source: Trip Generation, Institute of Transportation Engineers, 11th Edition, 2021
- (2) ITE Land Use No. 840 Automobile Sales (New)
- (3) KSF = 1,000 square feet

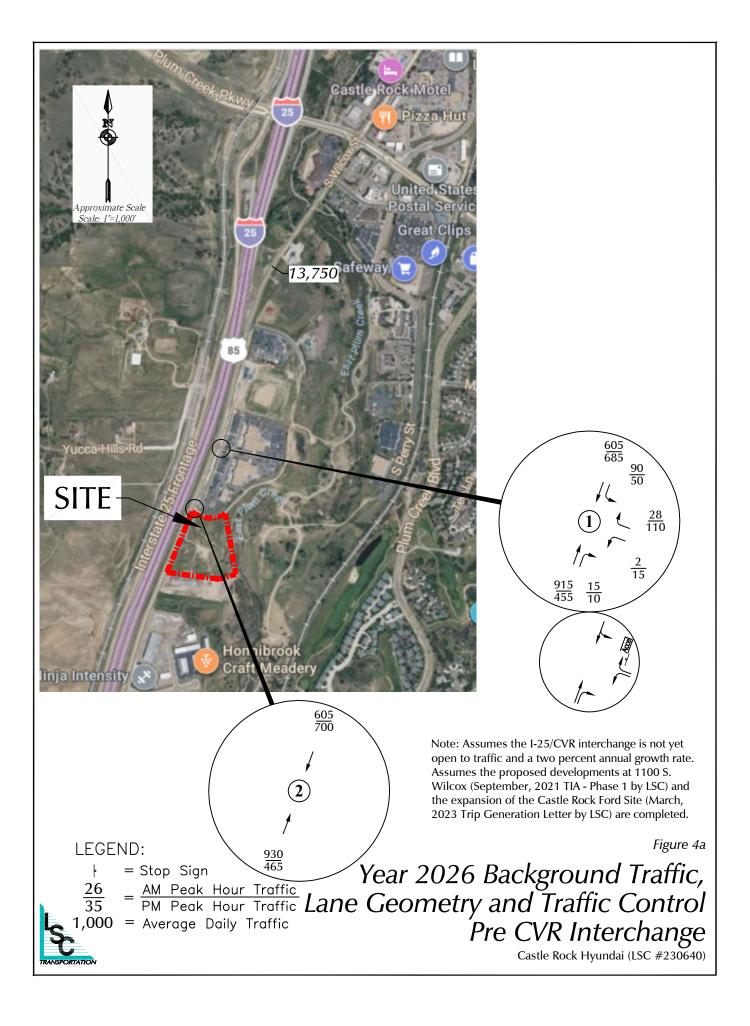


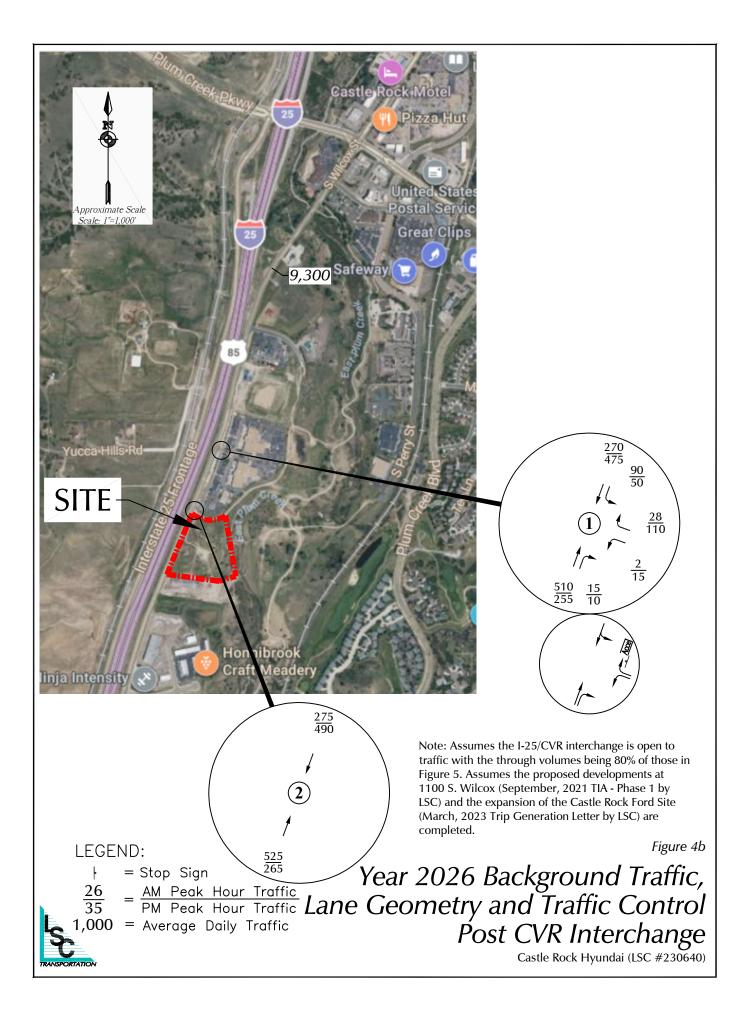


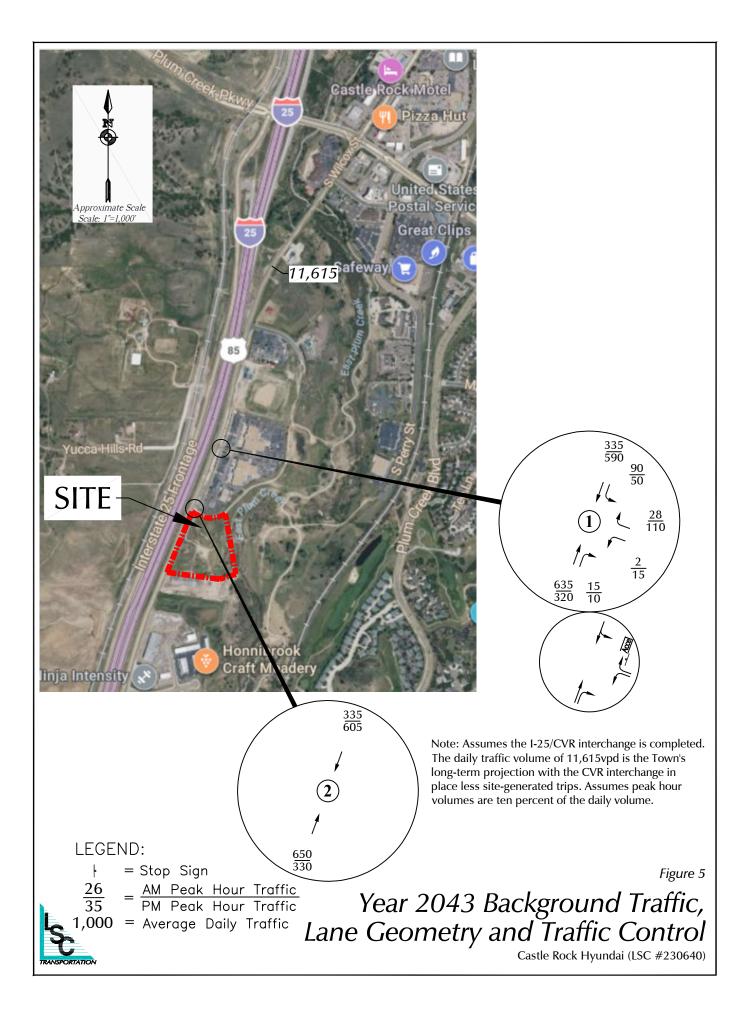
Site Plan

Castle Rock Hyundai (LSC #230640)



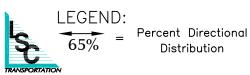




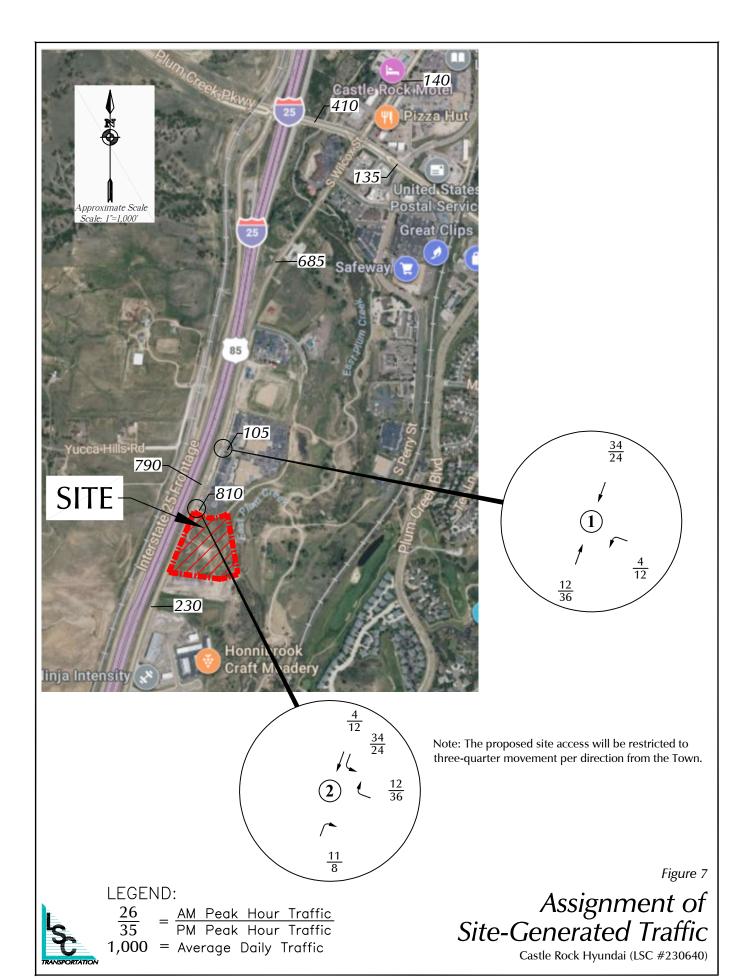


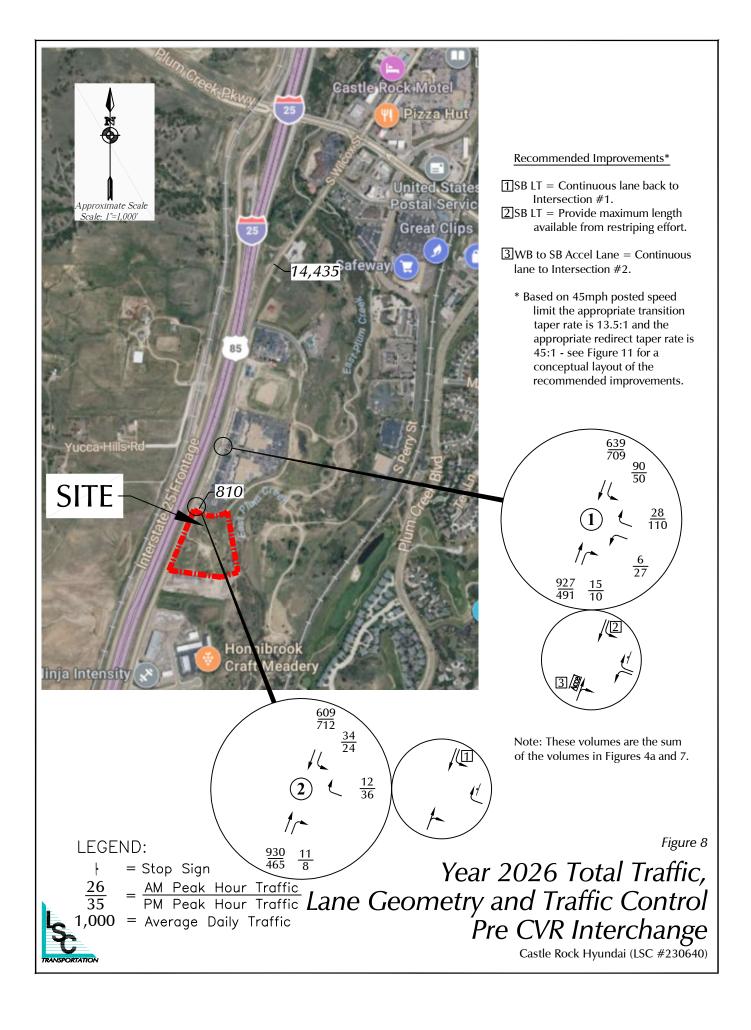


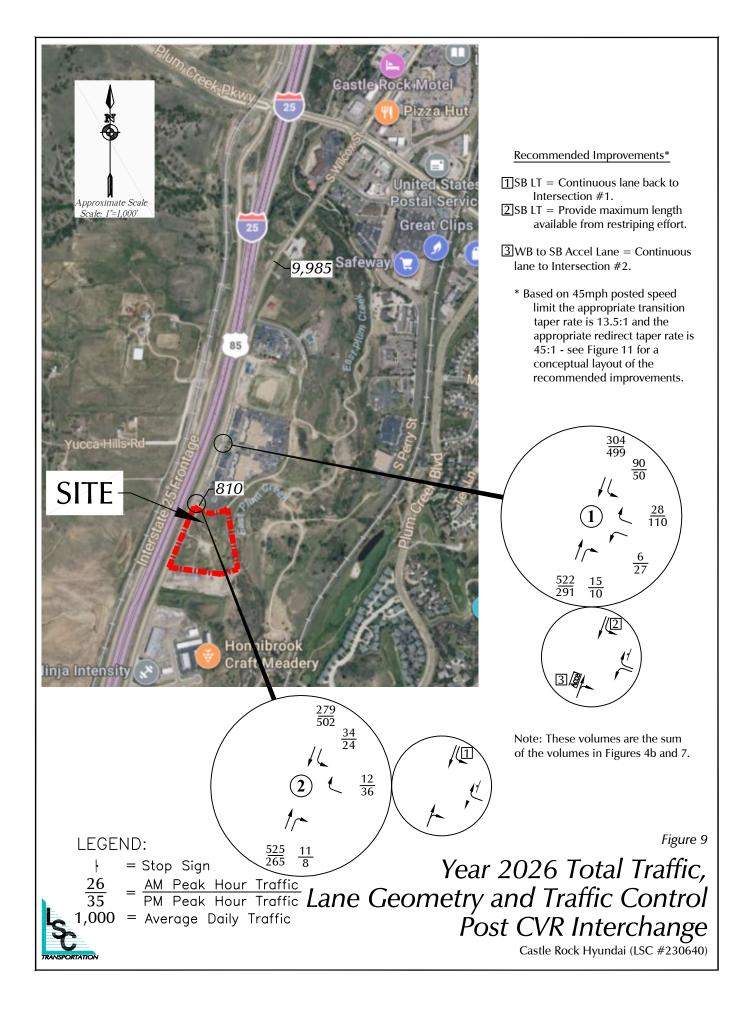


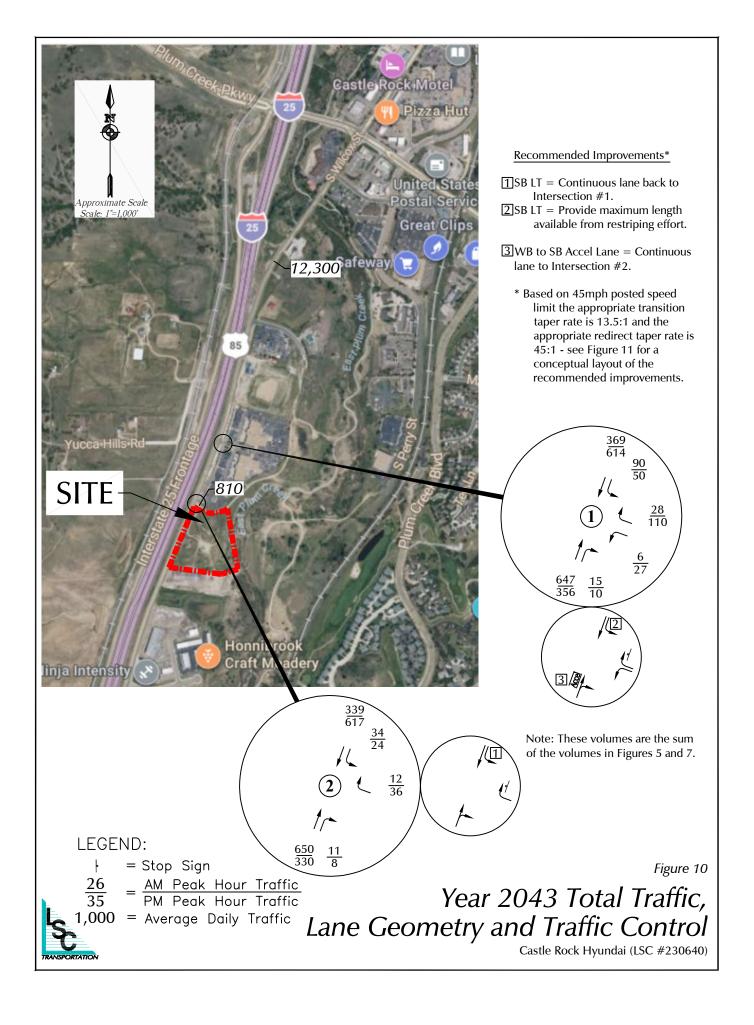


## Directional Distribution of Site-Generated Traffic











S. Wilcox Street Conceptual Improvements
Castle Rock Hyundai (LSC #230640)



#### **COUNTER MEASURES INC.**

1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: WILCOX ST E/W STREET: CASTLEROCK FORD

CITY: CASTLEROCK **COUNTY: DOUGLAS** 

Groups Printed- VEHICLES

CASTLEROCK FORD WILCOX ST

File Name: WILCMAIN Site Code : 00000016

Start Date : 8/23/2023 Page No : 1

| _ |                    |      |       |       |      |      |        |       | rinted- | VEHIC |       |       |      |      |       |       |      |               |
|---|--------------------|------|-------|-------|------|------|--------|-------|---------|-------|-------|-------|------|------|-------|-------|------|---------------|
|   |                    |      | WILCO |       |      | CAS  | STLERC | -     | RD      |       | WILC  |       |      |      | NO AC |       |      |               |
|   |                    |      | South | bound |      |      | West   | ound  |         |       | North | bound |      |      | Eastb | ound  |      |               |
|   | Start Time         | Left | Thru  | Right | Peds | Left | Thru   | Right | Peds    | Left  | Thru  | Right | Peds | Left | Thru  | Right | Peds | Int.<br>Total |
|   | Factor             | 1.0  | 1.0   | 1.0   | 1.0  | 1.0  | 1.0    | 1.0   | 1.0     | 1.0   | 1.0   | 1.0   | 1.0  | 1.0  | 1.0   | 1.0   | 1.0  |               |
|   | 06:30 AM           | 14   | 43    | 0     | 0    | 0    | 0      | 1     | 0       | 0     | 81    | 1     | 0    | 0    | 0     | 0     | 0    | 140           |
|   | 06:45 AM           | 19   | 71    | 0     | 0    | 0    | 0      | 0     | 0       | 0     | 121   | 3     | 0    | 0    | 0     | 0     | 0    | 214           |
| _ | Total              | 33   | 114   | 0     | 0    | 0    | 0      | 1     | 0       | 0     | 202   | 4     | 0    | 0    | 0     | 0     | 0    | 354           |
|   |                    |      |       |       |      |      |        |       |         |       |       |       |      |      |       |       |      |               |
|   | 07:00 AM           | 12   | 71    | 0     | 0    | 0    | 0      | 3     | 0       | 0     | 165   | 1     | 0    | 0    | 0     | 0     | 0    | 252           |
|   | 07:15 AM           | 14   | 98    | 0     | 0    | 0    | 0      | 6     | 0       | 0     | 215   | 2     | 0    | 0    | 0     | 0     | 0    | 335           |
|   | 07:30 AM           | 17   | 180   | 0     | 0    | 0    | 0      | 4     | 0       | 0     | 199   | 2     | 0    | 0    | 0     | 0     | 0    | 402           |
|   | 07:45 AM           | 20   | 181   | 0     | 0    | 0    | 0      | 7     | 0       | 0     | 227   | 2     | 0    | 0    | 0     | 0     | 0    | 437           |
|   | Total              | 63   | 530   | 0     | 0    | 0    | 0      | 20    | 0       | 0     | 806   | 7     | 0    | 0    | 0     | 0     | 0    | 1426          |
|   |                    |      |       |       | - 1  |      |        |       | - 1     |       |       |       | - 1  |      |       |       | - 1  |               |
|   | 08:00 AM           | 24   | 100   | 0     | 0    | 1    | 0      | 10    | 0       | 0     | 185   | 6     | 0    | 0    | 0     | 0     | 0    | 326           |
|   | 08:15 AM           | 20   | 79    | 0     | 0    | 2    | 0      | 6     | 0       | 0     | 99    | 2     | 0    | 0    | 0     | 0     | 0    | 208           |
| _ |                    |      |       |       |      |      |        | - 10  |         |       |       |       |      |      |       |       |      |               |
|   | Total              | 44   | 179   | 0     | 0    | 3    | 0      | 16    | 0       | 0     | 284   | 8     | 0    | 0    | 0     | 0     | 0    | 534           |
|   |                    |      |       |       |      |      |        |       |         |       |       |       |      |      |       |       |      |               |
|   |                    |      |       |       |      |      |        |       |         |       |       |       |      |      |       |       |      |               |
|   | 04:00 PM           | 13   | 148   | 0     | 0    | 8    | 0      | 14    | 0       | 0     | 137   | 2     | 0    | 0    | 0     | 0     | 0    | 322           |
|   | 04:15 PM           | 9    | 145   | Ö     | 0    | 4    | 0      | 20    | 0       | 0     | 92    | 6     | Ö    | Ö    | 0     | 0     | 0    | 276           |
|   | 04:30 PM           | 12   | 136   | 0     | 0    | 7    | 0      | 19    | 0       | 0     | 110   | 1     | 0    | 0    | 0     | 0     | 0    | 285           |
|   | 04:45 PM           | 14   | 144   | Ö     | Ö    | 1    | 0      | 19    | 0       | 0     | 106   | 4     | Ö    | Ö    | 0     | 0     | Ö    | 288           |
| - | Total              | 48   | 573   | 0     | 0    | 20   | 0      | 72    | 0       | 0     | 445   | 13    | 0    | 0    | 0     | 0     | 0    | 1171          |
|   |                    |      |       |       | ,    |      |        |       | ,       |       |       |       |      |      |       |       | '    |               |
|   | 05:00 PM           | 14   | 148   | 0     | 0    | 4    | 0      | 26    | 0       | 0     | 101   | 2     | 0    | 0    | 0     | 0     | 0    | 295           |
|   | 05:15 PM           | 9    | 163   | 0     | 0    | 3    | 0      | 36    | 0       | 0     | 120   | 2     | 0    | 0    | 0     | 0     | 0    | 333           |
|   | 05:30 PM           | 8    | 183   | 0     | 0    | 2    | 0      | 14    | 0       | 0     | 104   | 3     | 0    | 0    | 0     | 0     | 0    | 314           |
|   | 05:45 PM           | 8    | 127   | 0     | 0    | 3    | 0      | 19    | 0       | 0     | 94    | 1     | 0    | 0    | 0     | 0     | 0    | 252           |
| - | Total              | 39   | 621   | 0     | 0    | 12   | 0      | 95    | 0       | 0     | 419   | 8     | 0    | 0    | 0     | 0     | 0    | 1194          |
|   |                    |      |       |       | '    |      |        |       | ,       |       |       |       | "    |      |       |       | '    |               |
|   | <b>Grand Total</b> | 227  | 2017  | 0     | 0    | 35   | 0      | 204   | 0       | 0     | 2156  | 40    | 0    | 0    | 0     | 0     | 0    | 4679          |
|   | Apprch %           | 10.1 | 89.9  | 0.0   | 0.0  | 14.6 | 0.0    | 85.4  | 0.0     | 0.0   | 98.2  | 1.8   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  |               |
|   | Total %            | 4.9  | 43.1  | 0.0   | 0.0  | 0.7  | 0.0    | 4.4   | 0.0     | 0.0   | 46.1  | 0.9   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  |               |
|   |                    |      |       |       |      |      |        |       |         |       |       |       |      |      |       |       |      |               |

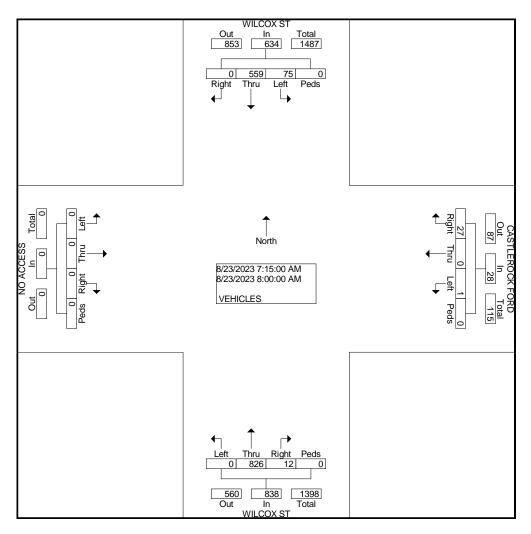
#### **COUNTER MEASURES INC.**

1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: WILCOX ST E/W STREET: CASTLEROCK FORD

CITY: CASTLEROCK COUNTY: DOUGLAS File Name : WILCMAIN Site Code : 00000016 Start Date : 8/23/2023 Page No : 2

|             |       |        | LCOX    | _     |         | C       |      |                | K FOF | RD    |       |     | LCOX   | _   |       |      |     | ACC    |     |       |       |
|-------------|-------|--------|---------|-------|---------|---------|------|----------------|-------|-------|-------|-----|--------|-----|-------|------|-----|--------|-----|-------|-------|
|             |       | So     | uthbo   | und   |         |         | W    | <u>estbo</u> ı | und   |       |       | No  | rthbou | und |       |      | Ea  | astbou | ınd |       |       |
| Start       | Left  | Thr    | Rig     | Ped   | App.    | Left    | Thr  | Rig            | Ped   | App.  | Left  | Thr | Rig    | Ped | App.  | Left | Thr | Rig    | Ped | App.  | Int.  |
| Time        | Leit  | u      | ht      | S     | Total   | Leit    | u    | ht             | s     | Total | Len   | u   | ht     | s   | Total | Leit | u   | ht     | S   | Total | Total |
| Peak Hour I | rom 0 | 7:15 A | AM to ( | 08:00 | 4M - Pe | eak 1 c | of 1 |                |       |       |       |     |        |     |       |      |     |        |     |       |       |
| Intersecti  | 07:15 | 5 AM   |         |       |         |         |      |                |       |       |       |     |        |     |       |      |     |        |     |       |       |
| on          | 0     | , ,    |         |       |         |         |      |                |       |       |       |     |        |     |       |      |     |        |     |       |       |
| Volume      | 75    | 559    | 0       | 0     | 634     | 1       | 0    | 27             | 0     | 28    | 0     | 826 | 12     | 0   | 838   | 0    | 0   | 0      | 0   | 0     | 1500  |
| Percent     | 11.   | 88.    | 0.0     | 0.0   |         | 3.6     | 0.0  | 96.            | 0.0   |       | 0.0   | 98. | 1.4    | 0.0 |       | 0.0  | 0.0 | 0.0    | 0.0 |       |       |
|             | 8     | 2      |         |       |         |         |      | 4              |       |       |       | 6   |        |     |       |      |     |        |     |       |       |
| 07:45       | 20    | 181    | 0       | 0     | 201     | 0       | 0    | 7              | 0     | 7     | 0     | 227 | 2      | 0   | 229   | 0    | 0   | 0      | 0   | 0     | 437   |
| Volume      |       |        |         |       |         |         |      |                |       |       |       |     |        |     |       |      |     |        |     |       | 0.050 |
| Peak        |       |        |         |       |         |         |      |                |       |       |       |     |        |     |       |      |     |        |     |       | 0.858 |
| Factor      |       |        |         |       |         |         |      |                |       |       |       |     |        |     |       |      |     |        |     |       |       |
| High Int.   | 07:45 | 5 AM   |         |       |         | 08:00   | AM   |                |       |       | 07:45 |     |        |     |       |      |     |        |     |       |       |
| Volume      | 20    | 181    | 0       | 0     | 201     | 1       | 0    | 10             | 0     | 11    | 0     | 227 | 2      | 0   | 229   |      |     |        |     |       |       |
| Peak        |       |        |         |       | 0.78    |         |      |                |       | 0.63  |       |     |        |     | 0.91  |      |     |        |     |       |       |
| Factor      |       |        |         |       | 9       |         |      |                |       | 6     |       |     |        |     | 5     |      |     |        |     | ļ     |       |



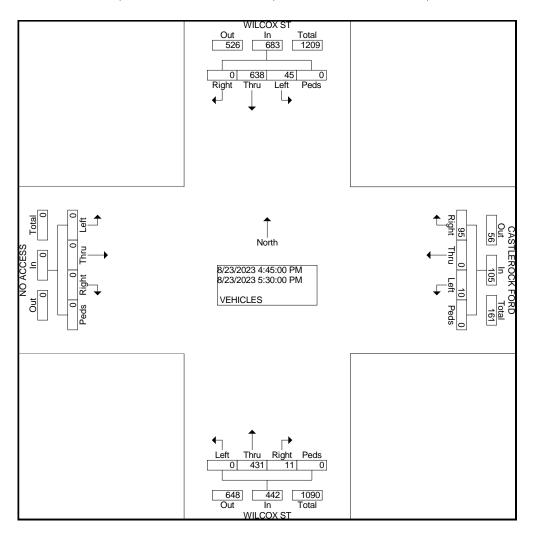
#### **COUNTER MEASURES INC.**

1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: WILCOX ST E/W STREET: CASTLEROCK FORD

CITY: CASTLEROCK COUNTY: DOUGLAS File Name : WILCMAIN Site Code : 00000016 Start Date : 8/23/2023 Page No : 3

|                          |       |          | ILCOX     |       |                  | С       |          | EROC<br>estboo | K FOF    | RD              |       |          | ILCOX     |          |                  |      |          | ACC       |          |               |               |
|--------------------------|-------|----------|-----------|-------|------------------|---------|----------|----------------|----------|-----------------|-------|----------|-----------|----------|------------------|------|----------|-----------|----------|---------------|---------------|
| Start<br>Time            | Left  | Thr      | Rig<br>ht | Ped   | App.<br>Total    | Left    | Thr<br>u | Rig<br>ht      | Ped<br>s | App.<br>Total   | Left  | Thr<br>u | Rig<br>ht | Ped<br>s | App.<br>Total    | Left | Thr<br>u | Rig<br>ht | Ped<br>s | App.<br>Total | Int.<br>Total |
| Peak Hour I              | rom C | )4:45 F  |           | 05:30 |                  | eak 1 d |          |                |          |                 |       |          |           | - 1      |                  |      | -        |           |          |               |               |
| Intersecti<br>on         | 04:45 | 5 PM     |           |       |                  |         |          |                |          |                 |       |          |           |          |                  |      |          |           |          |               |               |
| Volume                   | 45    | 638      | 0         | 0     | 683              | 10      | 0        | 95             | 0        | 105             | 0     | 431      | 11        | 0        | 442              | 0    | 0        | 0         | 0        | 0             | 1230          |
| Percent                  | 6.6   | 93.<br>4 | 0.0       | 0.0   |                  | 9.5     | 0.0      | 90.<br>5       | 0.0      |                 | 0.0   | 97.<br>5 | 2.5       | 0.0      |                  | 0.0  | 0.0      | 0.0       | 0.0      |               |               |
| 05:15<br>Volume          | 9     | 163      | 0         | 0     | 172              | 3       | 0        | 36             | 0        | 39              | 0     | 120      | 2         | 0        | 122              | 0    | 0        | 0         | 0        | 0             | 333           |
| Peak<br>Factor           |       |          |           |       |                  |         |          |                |          |                 |       |          |           |          |                  |      |          |           |          |               | 0.923         |
| High Int.                | 05:30 | ) PM     |           |       |                  | 05:15   | РМ       |                |          |                 | 05:15 | 5 PM     |           |          |                  |      |          |           |          |               |               |
| Volume<br>Peak<br>Factor | 8     |          | 0         | 0     | 191<br>0.89<br>4 | 3       | 0        | 36             | 0        | 39<br>0.67<br>3 | 0     | 120      | 2         | 0        | 122<br>0.90<br>6 |      |          |           |          |               |               |



Location: WILCOX ST S-O PLUM CREEK PKWY

City: CASTLEROCK County: DOUGLAS Direction: NORTH/SOUTH Site Code: 2326306 2322306

Station ID: 2326306

Start Date: 07262023 8/22/2023 End Date: 07272023 8/23/2023

Latitude: 0.000000 Longitude: 0.000000

|           |       |       | Longitude: 0.000000 |
|-----------|-------|-------|---------------------|
| 8/22/2023 | NORTH | SOUTH |                     |
| Time      |       |       | Total               |
| 12:00 AM  | *     | *     | 0                   |
| 1:00      | *     | *     | 0                   |
| 2:00      | *     | *     | 0                   |
| 3:00      | *     | *     | 0                   |
| 4:00      | *     | *     | 0                   |
| 5:00      | *     | *     | 0                   |
| 6:00      | *     | *     | 0                   |
| 7:00      | *     | *     | 0                   |
| 8:00      | *     | *     | 0<br>0<br>0         |
| 9:00      | *     | *     |                     |
| 10:00     | *     | *     | 0                   |
| 11:00     | *     | *     | 0                   |
| 12:00 PM  | 433   | 477   | 910                 |
| 1:00      | 376   | 386   | 762                 |
| 2:00      | 421   | 398   | 819                 |
| 3:00      | 622   | 693   | 1315                |
| 4:00      | 463   | 635   | 1098                |
| 5:00      | 456   | 593   | 1049                |
| 6:00      | 320   | 521   | 841                 |
| 7:00      | 195   | 357   | 552                 |
| 8:00      | 209   | 240   | 449                 |
| 9:00      | 58    | 120   | 178                 |
| 10:00     | 19    | 47    | 66                  |
| 11:00     | 10    | 40    | 50                  |
| Total     | 3582  | 4507  | 8089                |
| Percent   | 44.3% | 55.7% |                     |
| AM Peak   |       |       |                     |
| Volume    |       |       |                     |
| PM Peak   | 3:00  | 3:00  | 3:00                |
| Volume    | 622   | 693   | 1315                |

Location: WILCOX ST S-O PLUM CREEK PKWY

City: CASTLEROCK
County: DOUGLAS
Direction: NORTH/SOUTH

Site Code: 2326306 2322306

Station ID: 2326306

Start Date: 07262023 8/22/2023 End Date: 07272023 8/23/2023

Latitude: 0.000000 Longitude: 0.000000

|             |          |             |              | Longitude: 0.000000 |
|-------------|----------|-------------|--------------|---------------------|
| 8/23/2023   | NORTH    | SOUTH       |              |                     |
| Time        |          |             |              | Total               |
| 12:00 AM    | 2        | 11          |              | 13                  |
| 1:00        | 2        | 7           |              | 9                   |
| 2:00        | 6        | 2           |              | 8                   |
| 3:00        | 9        | 2           |              | 11                  |
| 4:00        | 46       | 6           |              | 52                  |
| 5:00        | 136      | 36          |              | 172                 |
| 6:00        | 329      | 213         |              | 542                 |
| 7:00        | 735      | 536         |              | 1271                |
| 8:00        | 481      | 395         |              | 876                 |
| 9:00        | 377      | 372         |              | 749                 |
| 10:00       | 387      | 366         |              | 753                 |
| 11:00       | 466      | 357         |              | 823                 |
| 12:00 PM    | 423      | 476         |              | 899                 |
| 1:00        | *        | *           |              | 0                   |
| 2:00        | *        | *           |              | 0                   |
| 3:00        | *        | *           |              | 0                   |
| 4:00        | *        | *           |              | 0                   |
| 5:00        | *        | *           |              | 0                   |
| 6:00        | *        | *           |              | 0                   |
| 7:00        | *        | *           |              | 0                   |
| 8:00        | *        | *           |              | 0                   |
| 9:00        | *        | *           |              | 0                   |
| 10:00       | *        | *           |              | 0                   |
| 11:00       | *        | *           |              | 0                   |
| Total       | 3399     | 2779        |              | 6178                |
| Percent     | 55.0%    | 45.0%       |              |                     |
| AM Peak     | 7:00     | 7:00        |              | 7:00                |
| Volume      | 735      | 536         |              | 1271                |
| PM Peak     | 12:00 PM | 12:00 PM    |              | 12:00 PM            |
| Volume      | 423      | 476         |              | 899                 |
| Grand Total | 6981     | 7286        |              | 14267               |
| Percent     | 48.9%    | 51.1%       |              |                     |
| ADT         |          | ADT: 13,071 | AADT: 13,071 |                     |

### **LEVEL OF SERVICE DEFINITIONS**

From Highway Capacity Manual, Transportation Research Board, 2016, 6th Edition

# UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS) Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

| , ippiioa | -                                   | pp Control, All-Way Stop Control, and Roundabouts  |
|-----------|-------------------------------------|--|
| LOS       | Average<br>Vehicle Control<br>Delay | Operational Characteristics  |
| A         | <10 seconds                         | Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.  |
| В         | 10 to 15<br>seconds                 | Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn.  |
| C         | 15 to 25<br>seconds                 | Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection.  Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.   |
| D         | 25 to 35<br>seconds                 | This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.   |
| Ш         | 35 to 50<br>seconds                 | The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach. |
| H.        | >50 seconds                         | The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.   |

| Int Delay, s/veh 0.6                  |             |        |        |         |             | ۱ |
|---------------------------------------|-------------|--------|--------|---------|-------------|---|
| Movement WBL                          | WBR         | BR NBT | NBR    | SBL     | SBT         | Į |
| Lane Configurations                   | WDK 7       |        | INDK   | JDL     | <u>ज्या</u> |   |
| Traffic Vol, veh/h 1                  | <b>1</b> 27 |        | 12     | 75      | <b>5</b> 59 |   |
| Future Vol, veh/h 1                   | 27          |        | 12     | 75      | 559         |   |
| Conflicting Peds, #/hr 0              | 0           |        | 0      | 0       | 0           |   |
| · ·                                   |             |        |        |         | Free        |   |
| Sign Control Stop<br>RT Channelized - | Stop        |        | Free   | Free    |             |   |
|                                       | Free        |        |        | -       | None        |   |
| Storage Length 100                    | 0           |        | 250    | -       | -           |   |
| Veh in Median Storage, # 0            | -           | •      | -      | -       | 0           |   |
| Grade, % 0                            | -           |        | -      | -       | 0           |   |
| Peak Hour Factor 86                   | 86          |        | 86     | 86      | 86          |   |
| Heavy Vehicles, % 2                   | 2           |        | 2      | 2       | 2           |   |
| Mvmt Flow 1                           | 31          | 31 960 | 14     | 87      | 650         |   |
|                                       |             |        |        |         |             |   |
| Major/Minor Minor1                    | P           | Major1 | N      | /lajor2 |             | ĺ |
| Conflicting Flow All 1784             |             |        | 0      | 974     | 0           |   |
| Stage 1 960                           | -           |        | U      | 9/4     |             |   |
|                                       |             |        | -      |         | -           |   |
| Stage 2 824                           | -           |        | -      | -       | -           |   |
| Critical Hdwy 6.42                    | -           |        | -      | 4.12    | -           |   |
| Critical Hdwy Stg 1 5.42              | -           |        | -      | -       | -           |   |
| Critical Hdwy Stg 2 5.42              | -           |        | -      | -       | -           |   |
| Follow-up Hdwy 3.518                  | -           |        | -      | 2.218   | -           |   |
| Pot Cap-1 Maneuver 90                 | 0           |        | -      | 708     | -           |   |
| Stage 1 372                           | 0           |        | -      | -       | -           |   |
| Stage 2 431                           | 0           | 0 -    | -      | -       | -           |   |
| Platoon blocked, %                    |             | -      | -      |         | -           |   |
| Mov Cap-1 Maneuver 73                 | -           |        | -      | 708     | -           |   |
| Mov Cap-2 Maneuver 197                | -           |        | -      | -       | -           |   |
| Stage 1 372                           | -           |        | -      | -       | -           |   |
| Stage 2 348                           | -           |        | -      | -       | -           |   |
| J                                     |             |        |        |         |             |   |
| A                                     |             | ND     |        | CE      |             |   |
| Approach WB                           |             | NB     |        | SB      |             |   |
| HCM Control Delay, s 23.4             |             | 0      |        | 1.3     |             |   |
| HCM LOS C                             |             |        |        |         |             |   |
|                                       |             |        |        |         |             |   |
| Minor Lane/Major Mvmt                 | NBT         | RT MRR | NBLn1W | /RI n2  | SBL         |   |
| Capacity (veh/h)                      |             |        | 197    | -       | 708         |   |
|                                       | -           |        |        |         |             |   |
| HCM Control Doloy (c)                 | -           |        | 0.006  |         | 0.123       |   |
| HCM Long LOS                          | -           |        | 23.4   | 0       | 10.8        |   |
| HCM Lane LOS                          | -           |        | 0      | Α       | B<br>0.4    |   |
| HCM 95th %tile Q(veh)                 |             |        | - 11   | -       | 11/1        |   |

| Intersection           |        |       |             |          |        |           |
|------------------------|--------|-------|-------------|----------|--------|-----------|
| Int Delay, s/veh       | 0.5    |       |             |          |        |           |
| Movement               | WBL    | WBR   | NBT         | NBR      | SBL    | SBT       |
| Lane Configurations    | NDL    | VVDIX | ND1         | TO INDIK | JDL    | <u> અ</u> |
| Traffic Vol, veh/h     | 10     | 95    | <b>4</b> 31 | 11       | 45     | 638       |
| Future Vol, veh/h      | 10     | 95    | 431         | 11       | 45     | 638       |
| Conflicting Peds, #/hr | 0      | 0     | 431         | 0        | 0      | 030       |
| Sign Control           | Stop   | Stop  | Free        | Free     | Free   | Free      |
| RT Channelized         | 310p   | Free  | -           | None     | -      | None      |
| Storage Length         | 100    | 0     | -           | 250      |        | - TOTIC   |
| Veh in Median Storage  |        | -     | 0           | 250      | _      | 0         |
| Grade, %               | 0      | -     | 0           | -        | -      | 0         |
| Peak Hour Factor       | 92     | 92    | 92          | 92       | 92     | 92        |
|                        | 2      | 2     | 2           | 2        | 2      | 2         |
| Heavy Vehicles, %      |        |       |             |          |        |           |
| Mvmt Flow              | 11     | 103   | 468         | 12       | 49     | 693       |
|                        |        |       |             |          |        |           |
| Major/Minor            | Minor1 | N     | /lajor1     | N        | Major2 |           |
| Conflicting Flow All   | 1259   | -     | 0           | 0        | 480    | 0         |
| Stage 1                | 468    | -     | -           | -        | -      | -         |
| Stage 2                | 791    | -     | -           | -        | -      | -         |
| Critical Hdwy          | 6.42   | -     | -           | -        | 4.12   | -         |
| Critical Hdwy Stg 1    | 5.42   | _     | -           | -        | _      | _         |
| Critical Hdwy Stg 2    | 5.42   | _     | -           | -        | -      | _         |
| Follow-up Hdwy         | 3.518  | _     | _           | -        | 2.218  | _         |
| Pot Cap-1 Maneuver     | 188    | 0     | _           | -        | 1082   | _         |
| Stage 1                | 630    | 0     | _           | _        | -      | _         |
| Stage 2                | 447    | 0     | _           | _        | _      | _         |
| Platoon blocked, %     | 117    | U     | _           | _        |        | _         |
| Mov Cap-1 Maneuver     | 174    | _     | _           | _        | 1082   | _         |
| Mov Cap 1 Maneuver     | 302    | _     | _           | _        | 1002   | _         |
| Stage 1                | 630    | _     |             |          | _      | -         |
| Stage 2                | 414    | -     | -           | -        | -      | -         |
| Staye 2                | 414    | -     | <u>-</u>    | -        | -      | -         |
|                        |        |       |             |          |        |           |
| Approach               | WB     |       | NB          |          | SB     |           |
| HCM Control Delay, s   | 17.4   |       | 0           |          | 0.6    |           |
| HCM LOS                | С      |       |             |          |        |           |
|                        |        |       |             |          |        |           |
| Minor Long/Major M.    | at .   | NDT   | NDDV        | VDI ~1V  | VDL ~2 | CDI       |
| Minor Lane/Major Mvn   | ι      | NBT   |             | VBLn1V   |        | SBL       |
| Capacity (veh/h)       |        | -     | -           | 002      |        | 1082      |
| HCM Lane V/C Ratio     |        | -     |             | 0.036    |        | 0.045     |
| HCM Control Delay (s)  |        | -     | -           |          | 0      | 8.5       |
| HCM Lane LOS           |        | -     | -           | С        | Α      | Α         |
| HCM 95th %tile Q(veh   |        | -     | -           | 0.1      | -      | 0.1       |
| HOW FOUT TOUTE Q(VEI)  | )      | -     |             | U. I     | -      | 0.1       |

| Intersection  | 0.7   |                                 |  |                                 |  |                            |
|---|---|---------------------------------|--|---------------------------------|--|----------------------------|
| Int Delay, s/veh  | 0.7   |                                 |  |                                 |  |                            |
| Movement  | WBL   | WBR                             | NBT  | NBR                             | SBL  | SBT                        |
| Lane Configurations   | 7   | - 7                             |  | 7                               |  | सी                         |
| Traffic Vol, veh/h  | 2   | 28                              | 915  | 15                              | 90   | 605                        |
| Future Vol, veh/h   | 2   | 28                              | 915  | 15                              | 90   | 605                        |
| Conflicting Peds, #/hr  | 0   | 0                               | 0  | 0                               | 0  | 0                          |
| Sign Control  | Stop  | Stop                            | Free   | Free                            | Free   | Free                       |
| RT Channelized  | -   | Free                            | -  | None                            | -  | None                       |
| Storage Length  | 100   | 0                               | -  | 250                             | -  | -                          |
| Veh in Median Storage   | e,# 0   | -                               | 0  | -                               | -  | 0                          |
| Grade, %  | 0   | -                               | 0  | -                               | -  | 0                          |
| Peak Hour Factor  | 86  | 86                              | 86   | 86                              | 86   | 86                         |
| Heavy Vehicles, %   | 2   | 2                               | 2  | 2                               | 2  | 2                          |
| Mvmt Flow   | 2   | 33                              | 1064   | 17                              | 105  | 703                        |
|   |   |                                 |  |                                 |  |                            |
|   |   |                                 |  |                                 |  |                            |
| Major/Minor   | Minor1  |                                 | Major1   | <u> </u>                        | Major2   |                            |
|   | Minor1<br>1977  |                                 | Major1<br>0                                    | <u>N</u>                        | <u>Major2</u><br>1081                              | 0                          |
| Conflicting Flow All  |   |                                 | Major1<br>0                                    |                                 | <u>Major2</u><br>1081                              | 0                          |
| Conflicting Flow All Stage 1  | 1977  | -                               | 0  |                                 | 1081   |                            |
| Conflicting Flow All Stage 1 Stage 2  | 1977<br>1064  | -                               | 0  |                                 | 1081   | -                          |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy  | 1977<br>1064<br>913   | -<br>-<br>-                     | 0<br>-<br>-                                    |                                 | 1081   | -                          |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1  | 1977<br>1064<br>913<br>6.42   | -<br>-<br>-                     | 0<br>-<br>-<br>-                               | 0<br>-<br>-                     | 1081   | -<br>-                     |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2  | 1977<br>1064<br>913<br>6.42<br>5.42   | -<br>-<br>-                     | 0<br>-<br>-<br>-                               | 0<br>-<br>-<br>-<br>-           | 1081   | -<br>-<br>-                |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy   | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42   | -<br>-<br>-<br>-                | 0<br>-<br>-<br>-<br>-                          | 0<br>-<br>-<br>-<br>-           | 1081<br>-<br>-<br>4.12<br>-                        | -<br>-<br>-<br>-           |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver  | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518                                  | -<br>-<br>-<br>-<br>-           | 0<br>-<br>-<br>-<br>-                          | -<br>-<br>-<br>-<br>-           | 1081<br>-<br>-<br>4.12<br>-<br>-<br>2.218          | -<br>-<br>-<br>-<br>-      |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1  | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68                            | -<br>-<br>-<br>-<br>-<br>-<br>0 | -<br>-<br>-<br>-<br>-                          | -<br>-<br>-<br>-<br>-           | 1081<br>-<br>-<br>4.12<br>-<br>-<br>2.218          | -<br>-<br>-<br>-<br>-      |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver  | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68<br>332                     | -<br>-<br>-<br>-<br>-<br>0<br>0 | 0<br>-<br>-<br>-<br>-<br>-<br>-                | 0<br>-<br>-<br>-<br>-<br>-<br>- | 1081<br>-<br>-<br>4.12<br>-<br>-<br>2.218<br>645   | -<br>-<br>-<br>-<br>-<br>- |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %                                       | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68<br>332<br>391              | -<br>-<br>-<br>-<br>-<br>0<br>0 | 0<br>-<br>-<br>-<br>-<br>-<br>-                | 0<br>-<br>-<br>-<br>-<br>-<br>- | 1081<br>-<br>-<br>4.12<br>-<br>-<br>2.218<br>645   | -<br>-<br>-<br>-<br>-<br>- |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2  | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68<br>332<br>391              | -<br>-<br>-<br>-<br>-<br>0<br>0 | 0<br>-<br>-<br>-<br>-<br>-<br>-<br>-           |                                 | 1081<br>-<br>4.12<br>-<br>-<br>2.218<br>645<br>-   |                            |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver                    | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68<br>332<br>391              | -<br>-<br>-<br>-<br>-<br>0<br>0 | 0<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- |                                 | 1081<br>-<br>4.12<br>-<br>2.218<br>645<br>-<br>645 |                            |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver | 1977<br>1064<br>913<br>6.42<br>5.42<br>5.42<br>3.518<br>68<br>332<br>391<br>50<br>163 | -<br>-<br>-<br>-<br>-<br>0<br>0 | 0<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- |                                 | 1081<br>-<br>4.12<br>-<br>2.218<br>645<br>-<br>645 |                            |

| Approach             | WB   | NB | SB  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 27.4 | 0  | 1.5 |
| HCM LOS              | D    |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1WBL | _n2 | SBL  | SBT |  |
|-----------------------|-----|-------------|-----|------|-----|--|
| Capacity (veh/h)      | -   | - 163       | -   | 645  | -   |  |
| HCM Lane V/C Ratio    | -   | - 0.014     | - 0 | .162 | -   |  |
| HCM Control Delay (s) | -   | - 27.4      | 0   | 11.7 | 0   |  |
| HCM Lane LOS          | -   | - D         | Α   | В    | Α   |  |
| HCM 95th %tile Q(veh) | -   | - 0         | -   | 0.6  | -   |  |

| Intersection           |          |      |          |        |        |              |
|------------------------|----------|------|----------|--------|--------|--------------|
| Int Delay, s/veh       | 0.6      |      |          |        |        |              |
|                        |          | WDD  | NDT      | NDD    | CDI    | CDT          |
| Movement               | WBL      | WBR  | NBT      | NBR    | SBL    | SBT          |
| Lane Configurations    | <b>^</b> | 110  | <b>↑</b> | 7      |        | <del>વ</del> |
| Traffic Vol, veh/h     | 15       | 110  | 455      | 10     | 50     | 685          |
| Future Vol, veh/h      | 15       | 110  | 455      | 10     | 50     | 685          |
| Conflicting Peds, #/hr | 0        | 0    | 0        | 0      | 0      | 0            |
| Sign Control           | Stop     | Stop | Free     | Free   | Free   | Free         |
| RT Channelized         | -        | Free | -        | None   | -      | None         |
| Storage Length         | 100      | 0    | -        | 250    | -      | -            |
| Veh in Median Storage  | e, # 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              | 16       | 120  | 495      | 11     | 54     | 745          |
| WWW. Tiow              | 10       | 120  | 170      |        | 01     | 7 10         |
|                        |          |      |          |        |        |              |
|                        | Minor1   |      | Major1   |        | Major2 |              |
| Conflicting Flow All   | 1348     | -    | 0        | 0      | 506    | 0            |
| Stage 1                | 495      | -    | -        | -      | -      | -            |
| Stage 2                | 853      | -    | -        | -      | -      | -            |
| Critical Hdwy          | 6.42     | -    | -        | -      | 4.12   | -            |
| Critical Hdwy Stg 1    | 5.42     | -    | -        | -      | -      | -            |
| Critical Hdwy Stg 2    | 5.42     | -    | -        | -      | -      | -            |
| Follow-up Hdwy         | 3.518    | -    | -        | -      | 2.218  | -            |
| Pot Cap-1 Maneuver     | 166      | 0    | -        | -      | 1059   | -            |
| Stage 1                | 613      | 0    | _        | _      |        | _            |
| Stage 2                | 418      | 0    |          |        | -      |              |
| Platoon blocked, %     | 410      | U    |          |        |        | _            |
|                        | 150      |      | -        | -      | 1050   | -            |
| Mov Cap-1 Maneuver     | 152      | -    | -        | -      | 1059   | -            |
| Mov Cap-2 Maneuver     | 279      | -    | -        | -      | -      | -            |
| Stage 1                | 613      | -    | -        | -      | -      | -            |
| Stage 2                | 382      | -    | -        | -      | -      | -            |
|                        |          |      |          |        |        |              |
| Approach               | WB       |      | NB       |        | SB     |              |
| HCM Control Delay, s   | 18.7     |      | 0        |        | 0.6    |              |
| HCM LOS                | C        |      | - 0      |        | 0.0    |              |
| TIOWI LOG              |          |      |          |        |        |              |
|                        |          |      |          |        |        | 0=:          |
| Minor Lane/Major Mvn   | nt       | NBT  | NBRV     | VBLn1V |        | SBL          |
| Capacity (veh/h)       |          | -    | -        | 279    |        | 1059         |
| HCM Lane V/C Ratio     |          | -    | -        | 0.058  | -      | 0.051        |
| HCM Control Delay (s)  | )        | -    | -        | 18.7   | 0      | 8.6          |
| HCM Lane LOS           |          | -    | -        | С      | Α      | Α            |
| HCM 95th %tile Q(veh   | )        | -    | -        | 0.2    | -      | 0.2          |
|                        | •        |      |          |        |        |              |

| Intersection           |           |        |          |        |        |          |   |
|------------------------|-----------|--------|----------|--------|--------|----------|---|
| Int Delay, s/veh       | 1         |        |          |        |        |          |   |
| Movement               | WBL       | WBR    | NBT      | NDD    | ÇDI    | SBT      | Ī |
|                        |           |        |          | NBR    | SBL    |          |   |
| Lane Configurations    | <b>ነ</b>  | 70     | <b>†</b> | 15     | 00     | <b>4</b> |   |
| Traffic Vol, veh/h     | 2         | 28     | 510      | 15     | 90     | 270      |   |
| Future Vol, veh/h      | 2         | 28     | 510      | 15     | 90     | 270      |   |
| Conflicting Peds, #/hr | O Cton    | O Ctop | 0        | 0      | 0      | 0        |   |
| Sign Control           | Stop      | Stop   | Free     | Free   | Free   | Free     |   |
| RT Channelized         | 100       | Free   | -        | None   | -      | None     |   |
| Storage Length         | 100       | 0      | -        | 250    | -      | -        |   |
| Veh in Median Storage  |           | -      | 0        | -      | -      | 0        |   |
| Grade, %               | 0         | -      | 0        | -      | -      | 0        |   |
| Peak Hour Factor       | 86        | 86     | 86       | 86     | 86     | 86       |   |
| Heavy Vehicles, %      | 2         | 2      | 2        | 2      | 2      | 2        |   |
| Mvmt Flow              | 2         | 33     | 593      | 17     | 105    | 314      |   |
|                        |           |        |          |        |        |          |   |
| Major/Minor            | Minor1    | N      | /lajor1  | N      | Major2 |          |   |
| Conflicting Flow All   | 1117      |        | 0        | 0      | 610    | 0        |   |
| Stage 1                | 593       | -      | -        | -      | -      | -        |   |
| Stage 2                | 524       |        | _        | _      |        | _        |   |
| Critical Hdwy          | 6.42      | -      | -        |        | 4.12   | -        |   |
| Critical Hdwy Stg 1    | 5.42      |        | -        | -      | 4.12   |          |   |
| Critical Hdwy Stg 2    | 5.42      | -      | -        | -      | -      | -        |   |
| Follow-up Hdwy         | 3.518     | -      | -        | _      | 2.218  | _        |   |
| Pot Cap-1 Maneuver     | 229       | 0      |          | -      | 969    |          |   |
| •                      |           |        | -        | -      | 909    | -        |   |
| Stage 1                | 552       | 0      | -        | -      | -      | -        |   |
| Stage 2                | 594       | 0      | -        | -      | -      | -        |   |
| Platoon blocked, %     | 400       |        | -        | -      | 0/0    | -        |   |
| Mov Cap-1 Maneuver     | 199       | -      | -        | -      | 969    | -        |   |
| Mov Cap-2 Maneuver     | 334       | -      | -        | -      | -      | -        |   |
| Stage 1                | 552       | -      | -        | -      | -      | -        |   |
| Stage 2                | 516       | -      | -        | -      | -      | -        |   |
|                        |           |        |          |        |        |          |   |
| Approach               | WB        |        | NB       |        | SB     |          |   |
| HCM Control Delay, s   | 15.9      |        | 0        |        | 2.3    |          |   |
| HCM LOS                | 13.9<br>C |        | U        |        | 2.3    |          |   |
| FICIVI LOS             | C         |        |          |        |        |          |   |
|                        |           |        |          |        |        |          |   |
| Minor Lane/Major Mvn   | nt        | NBT    | NBRV     | VBLn1V | VBLn2  | SBL      |   |
| Capacity (veh/h)       |           | -      | -        | 334    | -      | 969      |   |
| HCM Lane V/C Ratio     |           | -      | -        | 0.007  | -      | 0.108    |   |
| HCM Control Delay (s)  |           | -      | -        |        | 0      | 9.2      |   |
| HCM Lane LOS           |           | -      | -        | С      | A      | Α        |   |
| HCM 95th %tile Q(veh   | )         | -      | -        | 0      | -      | 0.4      |   |
|                        | ,         |        |          | J      |        | 3.1      |   |

| Interception                      |        |      |        |        |        |       |  |
|-----------------------------------|--------|------|--------|--------|--------|-------|--|
| Intersection Int Delay, s/veh     | 0.8    |      |        |        |        |       |  |
|                                   |        |      |        |        |        |       |  |
| Movement                          | WBL    | WBR  | NBT    | NBR    | SBL    | SBT   |  |
| Lane Configurations               |        | 7    |        | _ 7    |        | 4     |  |
| Traffic Vol, veh/h                | 15     | 110  | 255    | 10     | 50     | 475   |  |
| Future Vol, veh/h                 | 15     | 110  | 255    | 10     | 50     | 475   |  |
| Conflicting Peds, #/hr            | 0      | 0    | 0      | 0      | 0      | 0     |  |
| Sign Control                      | Stop   | Stop | Free   | Free   | Free   | Free  |  |
| RT Channelized                    | -      | Free | -      | None   | -      | None  |  |
| Storage Length                    | 100    | 0    | -      | 250    | -      | -     |  |
| Veh in Median Storag              | e,# 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                         | 16     | 120  | 277    | 11     | 54     | 516   |  |
|                                   |        |      |        |        |        |       |  |
| N 4 a i a u /N 4 i u a u          | N 1! 1 |      | 1-1-4  |        | 1-10   |       |  |
|                                   | Minor1 |      | Major1 |        | Major2 |       |  |
| Conflicting Flow All              | 901    | -    | 0      | 0      | 288    | 0     |  |
| Stage 1                           | 277    | -    | -      | -      | -      | -     |  |
| Stage 2                           | 624    | -    | -      | -      | -      | -     |  |
| Critical Hdwy                     | 6.42   | -    | -      | -      | 4.12   | -     |  |
| Critical Hdwy Stg 1               | 5.42   | -    | -      | -      | -      | -     |  |
| Critical Hdwy Stg 2               | 5.42   | -    | -      | -      | -      | -     |  |
| Follow-up Hdwy                    | 3.518  | -    | -      | -      | 2.218  | -     |  |
| Pot Cap-1 Maneuver                | 309    | 0    | -      | -      | 1274   | -     |  |
| Stage 1                           | 770    | 0    | -      | -      | -      | -     |  |
| Stage 2                           | 534    | 0    | -      | -      | -      | -     |  |
| Platoon blocked, %                |        |      | -      | -      |        | -     |  |
| Mov Cap-1 Maneuver                | 291    | -    | -      | -      | 1274   | -     |  |
| Mov Cap-2 Maneuver                |        | -    | -      | -      | -      | -     |  |
| Stage 1                           | 770    | -    | -      | -      | -      | -     |  |
| Stage 2                           | 502    | -    | -      | -      | -      | -     |  |
| - · · g                           | ,,,    |      |        |        |        |       |  |
| A                                 | MD     |      | ND     |        | CD     |       |  |
| Approach                          | WB     |      | NB     |        | SB     |       |  |
| HCM Control Delay, s              |        |      | 0      |        | 8.0    |       |  |
| HCM LOS                           | В      |      |        |        |        |       |  |
|                                   |        |      |        |        |        |       |  |
| Minor Lane/Major Mvr              | nt     | NBT  | NBRV   | VBLn1V | VBI n2 | SBL   |  |
| Capacity (veh/h)                  |        | 1401 | אוטויי | 399    | -      | 1274  |  |
| HCM Lane V/C Ratio                |        | -    | -      | 0.041  |        | 0.043 |  |
|                                   | 1      |      |        | 14.4   |        |       |  |
| HCM Lang LOS                      | 7      | -    | -      |        | 0      | 8     |  |
| HCM Lane LOS HCM 95th %tile Q(vel | 2)     | -    | -      | B      | А      | A     |  |
| ncivi yatii %tile Q(ver           | 1)     | -    | -      | 0.1    | -      | 0.1   |  |

| Intersection                          |             |      |          |           |           |             |     |
|---------------------------------------|-------------|------|----------|-----------|-----------|-------------|-----|
| Int Delay, s/veh                      | 8.0         |      |          |           |           |             |     |
| Movement                              | WBL         | WBR  | NBT      | NBR       | SBL       | SBT         |     |
| Lane Configurations                   | <u> </u>    | 7    | <u> </u> | T T       | ODL       | <u>ક્રમ</u> |     |
| Traffic Vol, veh/h                    | 6           | 28   | 927      | 15        | 90        | 639         |     |
| Future Vol, veh/h                     | 6           | 28   | 927      | 15        | 90        | 639         |     |
| Conflicting Peds, #/hr                | 0           | 0    | 0        | 0         | 0         | 0           |     |
| Sign Control                          | Stop        | Stop | Free     | Free      | Free      | Free        |     |
| RT Channelized                        | -           | Free | -        | None      | -         | None        |     |
| Storage Length                        | 0           | 0    | -        | 0         | -         | -           |     |
| Veh in Median Storage                 |             | -    | 0        | -         | -         | 0           |     |
| Grade, %                              | 0           | -    | 0        | -         | -         | 0           |     |
| Peak Hour Factor                      | 86          | 86   | 86       | 86        | 86        | 86          |     |
| Heavy Vehicles, %                     | 2           | 2    | 2        | 2         | 2         | 2           |     |
| Mvmt Flow                             | 7           | 33   | 1078     | 17        | 105       | 743         |     |
|                                       |             |      |          |           |           |             |     |
| Major/Minor                           | Minor1      |      | Major1   | N         | Majora    |             |     |
|                                       |             |      | Major1   |           | Major2    | ^           |     |
| Conflicting Flow All                  | 2031        | -    | 0        | U         | 1095      | 0           |     |
| Stage 1                               | 1078<br>953 | -    | -        | -         | -         | -           |     |
| Stage 2                               | 6.42        | -    | -        | -         | -<br>/ 12 | -           |     |
| Critical Hdwy                         | 5.42        | -    | -        | -         | 4.12      | -           |     |
| Critical Hdwy Stg 1                   | 5.42        | -    | -        | -         | -         | -           |     |
| Critical Hdwy Stg 2<br>Follow-up Hdwy | 3.518       | -    | -        | -         | 2.218     | -           |     |
| Pot Cap-1 Maneuver                    | 3.518       | 0    | -        | -         | 637       | -           |     |
| Stage 1                               | 327         | 0    | -        | -         | 037       | -           |     |
| Stage 2                               | 375         | 0    | -        | -         | -         | -           |     |
| Platoon blocked, %                    | 3/3         | U    | -        | -         | -         | _           |     |
| Mov Cap-1 Maneuver                    | 45          | _    | -        | -         | 637       | -           |     |
| Mov Cap-1 Maneuver                    | 155         | -    | -        |           | 007       |             |     |
| Stage 1                               | 327         | -    | -        | -         | -         | -           |     |
| Stage 2                               | 270         | -    |          | _         |           |             |     |
| Stage 2                               | 270         |      |          |           |           |             |     |
|                                       |             |      |          |           |           |             |     |
| Approach                              | WB          |      | NB       |           | SB        |             |     |
| HCM Control Delay, s                  | 29.3        |      | 0        |           | 1.5       |             |     |
| HCM LOS                               | D           |      |          |           |           |             |     |
|                                       |             |      |          |           |           |             |     |
| Minor Lane/Major Mvn                  | nt          | NBT  | NRR\     | WBLn1V    | VRI n2    | SBL         | SBT |
| Capacity (veh/h)                      |             |      | - INDIK  | 155       | -         | 637         | -   |
| HCM Lane V/C Ratio                    |             |      |          | 0.045     |           | 0.164       | -   |
| HCM Control Delay (s                  | )           |      |          | 29.3      | 0         | 11.8        | 0   |
| HCM Lane LOS                          |             | _    | _        | 27.3<br>D | A         | В           | A   |
| HCM 95th %tile Q(veh                  | 1)          | _    | _        | 0.1       |           | 0.6         |     |
| 115W 75W 75W 75W Q (VCI               | '/          |      |          | J. 1      |           | 0.0         |     |

| Intersection                       |        |       |              |       |          |              |
|------------------------------------|--------|-------|--------------|-------|----------|--------------|
| Int Delay, s/veh                   | 0.4    |       |              |       |          |              |
| Movement                           | WBL    | WBR   | NBT          | NBR   | SBL      | SBT          |
| Lane Configurations                | WDL    | WBK   |              | NDK   | JDL<br>N | <u>301</u>   |
| Traffic Vol, veh/h                 | 0      | 12    | <b>3</b> 930 | 11    | 34       | <b>T</b> 609 |
| Future Vol, veh/h                  | 0      | 12    | 930          | 11    | 34       | 609          |
|                                    | 0      | 0     | 930          | 0     | 0        | 009          |
| Conflicting Peds, #/hr             |        |       |              |       |          |              |
| Sign Control                       | Stop   | Stop  | Free         | Free  | Free     | Free         |
| RT Channelized                     | -      | None  | -            | None  | 200      | None         |
| Storage Length                     | -      | 0     | -            | -     | 300      | -            |
| Veh in Median Storage,             |        | -     | 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      | 13    | 1011         | 12    | 37       | 662          |
|                                    |        |       |              |       |          |              |
| Major/Minor N                      | 1inor1 | N     | //ajor1      |       | Major2   |              |
| Conflicting Flow All               | _      | 1017  | 0            | 0     | 1023     | 0            |
| Stage 1                            | _      | -     | -            | -     | -        | -            |
| Stage 2                            |        | _     | _            | _     | _        | _            |
| Critical Hdwy                      | _      | 6.22  | _            | _     | 4.12     | _            |
| Critical Hdwy Stg 1                | _      | 0.22  | _            | _     | 1.12     | _            |
| Critical Hdwy Stg 2                | _      | _     | _            | _     | _        | _            |
| Follow-up Hdwy                     | _      | 3.318 | _            | _     | 2.218    | _            |
| Pot Cap-1 Maneuver                 | 0      | 288   | _            | _     | 679      | _            |
| Stage 1                            | 0      | -     |              | _     | 017      | _            |
| Stage 2                            | 0      | _     | _            |       | -        | _            |
| Platoon blocked, %                 | U      | -     | -            |       | -        | -            |
| Mov Cap-1 Maneuver                 | -      | 288   | -            | -     | 679      | -            |
| Mov Cap-2 Maneuver                 | -      | 200   | -            | -     | 0/9      | _            |
|                                    | -      | -     | -            | -     | -        | -            |
| Stage 1                            | -      | -     | -            | -     | -        | -            |
| Stage 2                            | -      | -     | -            | -     | -        | -            |
|                                    |        |       |              |       |          |              |
| Approach                           | WB     |       | NB           |       | SB       |              |
| HCM Control Delay, s               | 18.1   |       | 0            |       | 0.6      |              |
| HCM LOS                            | С      |       |              |       |          |              |
|                                    |        |       |              |       |          |              |
| N (!   /N ( - ! N ( !              |        | NDT   | MDDW         | VDI 1 | CDI      | CDT          |
| Minor Lane/Major Mvmt              |        | NBT   |              | VBLn1 | SBL      | SBT          |
| Capacity (veh/h)                   |        | -     | -            |       | 679      | -            |
| HCM Lane V/C Ratio                 |        | -     |              | 0.045 |          | -            |
| HCM Control Delay (s)              |        | -     | -            | 18.1  | 10.6     | -            |
|                                    |        |       |              | _     |          |              |
| HCM Lane LOS HCM 95th %tile Q(veh) |        | -     | -            | 0.1   | 0.2      | -            |

| Intersection                    | 0.0        |      |         |         |         |          |     |
|---------------------------------|------------|------|---------|---------|---------|----------|-----|
| Int Delay, s/veh                | 0.8        |      |         |         |         |          |     |
| Movement                        | WBL        | WBR  | NBT     | NBR     | SBL     | SBT      |     |
| Lane Configurations             |            | - 7  |         | 7       |         | र्स      |     |
| Traffic Vol, veh/h              | 27         | 110  | 491     | 10      | 50      | 709      |     |
| Future Vol, veh/h               | 27         | 110  | 491     | 10      | 50      | 709      |     |
| Conflicting Peds, #/hr          | 0          | 0    | _ 0     | 0       | 0       | _ 0      |     |
| Sign Control                    | Stop       | Stop | Free    | Free    | Free    | Free     |     |
| RT Channelized                  | -          | Free | -       | None    | -       | None     |     |
| Storage Length                  | 0          | 0    | -       | 0       | -       | -        |     |
| Veh in Median Storage           |            | -    | 0       | -       | -       | 0        |     |
| Grade, %                        | 0          | -    | 0       | - 02    | - 02    | 0        |     |
| Peak Hour Factor                | 92         | 92   | 92      | 92      | 92      | 92       |     |
| Heavy Vehicles, % Mymt Flow     | 29         | 120  | 534     | 2<br>11 | 2<br>54 | 2<br>771 |     |
| IVIVIIIL FIUW                   | 29         | 120  | 554     | 11      | 54      | 111      |     |
|                                 |            |      |         |         |         |          |     |
|                                 | Minor1     | N    | /lajor1 |         | Major2  |          |     |
| Conflicting Flow All            | 1413       | -    | 0       | 0       | 545     | 0        |     |
| Stage 1                         | 534        | -    | -       | -       | -       | -        |     |
| Stage 2                         | 879        | -    | -       | -       | -       | -        |     |
| Critical Hdwy                   | 6.42       | -    | -       | -       | 4.12    | -        |     |
| Critical Hdwy Stg 1             | 5.42       | -    | -       | -       | -       | -        |     |
| Critical Hdwy Stg 2             | 5.42       | -    | -       | -       | 2 210   | -        |     |
| Follow-up Hdwy                  | 3.518      | -    | -       |         | 2.218   | -        |     |
| Pot Cap-1 Maneuver              | 152<br>588 | 0    | -       | -       | 1024    | -        |     |
| Stage 1 Stage 2                 | 406        | 0    | -       | -       | -       | -        |     |
| Platoon blocked, %              | 400        | U    | -       | -       | -       | -        |     |
| Mov Cap-1 Maneuver              | 138        | _    | -       | -       | 1024    | -        |     |
| Mov Cap-1 Maneuver              | 265        | _    | _       | _       | -       | _        |     |
| Stage 1                         | 588        | _    | _       | _       | _       | _        |     |
| Stage 2                         | 369        | _    | _       | _       | _       | _        |     |
| g -                             | 20.        |      |         |         |         |          |     |
| Approach                        | MD         |      | ND      |         | CD      |          |     |
| Approach                        | WB         |      | NB      |         | SB      |          |     |
| HCM Control Delay, s<br>HCM LOS | 20.3<br>C  |      | 0       |         | 0.6     |          |     |
| HOW LUS                         | C          |      |         |         |         |          |     |
|                                 |            |      |         |         |         |          |     |
| Minor Lane/Major Mvm            | nt         | NBT  | NBRV    | VBLn1V  |         | SBL      | SBT |
| Capacity (veh/h)                |            | -    | -       | 265     |         | 1024     | -   |
| HCM Lane V/C Ratio              |            | -    | -       | 0.111   |         | 0.053    | -   |
| HCM Long LOS                    |            | -    | -       | 20.3    | 0       | 8.7      | 0   |

 $\mathsf{C}$ 

0.4

Α

Α

0.2

Α

HCM Lane LOS

HCM 95th %tile Q(veh)

| Intersection           |         |       |        |       |        |          |
|------------------------|---------|-------|--------|-------|--------|----------|
| Int Delay, s/veh       | 0.5     |       |        |       |        |          |
| Movement               | WBL     | WBR   | NBT    | NBR   | SBL    | SBT      |
| Lane Configurations    |         | 7     | ĵ.     |       | *      | <b>†</b> |
| Traffic Vol, veh/h     | 0       | 36    | 465    | 8     | 24     | 712      |
| Future Vol, veh/h      | 0       | 36    | 465    | 8     | 24     | 712      |
| Conflicting Peds, #/hr | 0       | 0     | 0      | 0     | 0      | 0        |
| Sign Control           | Stop    | Stop  | Free   | Free  | Free   | Free     |
| RT Channelized         |         | None  | -      |       | -      | None     |
| Storage Length         | _       | 0     | _      | -     | 300    | -        |
| 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        |
| Mymt Flow              | 0       | 39    | 505    | 9     | 26     | 774      |
| IVIVIIIL FIOW          | U       | 39    | 303    | 9     | 20     | //4      |
|                        |         |       |        |       |        |          |
| Major/Minor N          | /linor1 | N     | Major1 | 1     | Major2 |          |
| Conflicting Flow All   | -       | 510   | 0      | 0     | 514    | 0        |
| Stage 1                | -       | -     | -      | -     | -      | -        |
| Stage 2                | -       | -     | -      | -     | -      | -        |
| Critical Hdwy          | -       | 6.22  | -      | -     | 4.12   | -        |
| Critical Hdwy Stg 1    |         | _     | _      | _     | _      | _        |
| Critical Hdwy Stg 2    | _       | _     | _      | _     | -      | _        |
| Follow-up Hdwy         | _       | 3.318 | _      | _     | 2.218  | _        |
| Pot Cap-1 Maneuver     | 0       | 563   | _      | _     | 1052   | -        |
| Stage 1                | 0       | -     | _      | _     | -      | _        |
| Stage 2                | 0       | _     | _      | _     | _      | _        |
| Platoon blocked, %     | U       | _     |        | _     | _      |          |
| Mov Cap-1 Maneuver     | -       | 563   | -      | -     | 1052   | -        |
|                        |         |       |        | -     |        |          |
| Mov Cap-2 Maneuver     | -       | -     | -      | -     | -      | -        |
| Stage 1                | -       | -     | -      | -     | -      | -        |
| Stage 2                | -       | -     | -      | -     | -      | -        |
|                        |         |       |        |       |        |          |
| Approach               | WB      |       | NB     |       | SB     |          |
| HCM Control Delay, s   | 11.9    |       | 0      |       | 0.3    |          |
| HCM LOS                | В       |       | U      |       | 0.0    |          |
| HOW EOS                |         |       |        |       |        |          |
|                        |         |       |        |       |        |          |
| Minor Lane/Major Mvm   | t       | NBT   | NBRV   | VBLn1 | SBL    | SBT      |
| Capacity (veh/h)       |         | -     | -      | 563   | 1052   | -        |
| HCM Lane V/C Ratio     |         | -     | -      | 0.07  | 0.025  | -        |
| HCM Control Delay (s)  |         | -     | -      | 11.9  | 8.5    | -        |
| HCM Lane LOS           |         | -     | -      | В     | Α      | -        |
| HCM 95th %tile Q(veh)  |         | -     | -      | 0.2   | 0.1    | -        |
|                        |         |       |        |       |        |          |

| Intersection   |        |      |          |            |        |          |   |
|--|--------|------|----------|------------|--------|----------|---|
| Int Delay, s/veh   | 1      |      |          |            |        |          |   |
|  |        | MDD  | NDT      | NDD        | CDI    | CDT      | Į |
| Movement   | WBL    | WBR  | NBT      | NBR        | SBL    | SBT      |   |
| Lane Configurations  | Ť      | 7    | <b>†</b> | 7          | 00     | र्स      |   |
| Traffic Vol, veh/h   | 6      | 28   | 522      | 15         | 90     | 304      |   |
| Future Vol, veh/h  | 6      | 28   | 522      | 15         | 90     | 304      |   |
| Conflicting Peds, #/hr   | 0      | 0    | 0        | 0          | 0      | 0        |   |
| Sign Control   | Stop   | Stop | Free     | Free       | Free   | Free     |   |
| RT Channelized   | -      | Free | -        | None       | -      | None     |   |
| Storage Length   | 0      | 0    | -        | 0          | -      | -        |   |
| Veh in Median Storage  |        | -    | 0        | -          | -      | 0        |   |
| Grade, %   | 0      | -    | 0        | -          | -      | 0        |   |
| Peak Hour Factor   | 86     | 86   | 86       | 86         | 86     | 86       |   |
| Heavy Vehicles, %  | 2      | 2    | 2        | 2          | 2      | 2        |   |
| Mvmt Flow  | 7      | 33   | 607      | 17         | 105    | 353      |   |
|  |        |      |          |            |        |          |   |
| Major/Minor I  | Minor1 | N    | Major1   | Ŋ          | Major2 |          |   |
| Conflicting Flow All   | 1170   | - 1  | 0        | 0          | 624    | 0        |   |
| Stage 1  | 607    |      | -        | -          | 024    | -        |   |
| Stage 2  | 563    |      | -        | -          | -      | -        |   |
| Critical Hdwy  | 6.42   | -    | -        | -          | 4.12   | _        |   |
| Critical Hdwy Stg 1  | 5.42   | -    | -        | -          | 4.12   | _        |   |
| Critical Hdwy Stg 2  | 5.42   | -    | -        | -          | -      | -        |   |
| Follow-up Hdwy   | 3.518  | -    | -        | -          | 2.218  | -        |   |
| Pot Cap-1 Maneuver   | 213    | 0    | -        | -          | 957    | -        |   |
| •  | 544    | 0    | -        | -          | 907    | -        |   |
| Stage 1  | 570    | 0    | -        | -          | -      |          |   |
| Stage 2 Platoon blocked, %   | 370    | U    |          |            | -      | -        |   |
| The state of the s | 10/    |      | -        | -          | 057    | -        |   |
| Mov Cap 2 Manager  | 184    | -    | -        | -          | 957    | -        |   |
| Mov Cap-2 Maneuver   | 319    | -    | -        | -          | -      | -        |   |
| Stage 1  | 544    | -    | -        | -          | -      | -        |   |
| Stage 2  | 492    | -    | -        | -          | -      | -        |   |
|  |        |      |          |            |        |          |   |
| Approach   | WB     |      | NB       |            | SB     |          |   |
| HCM Control Delay, s   | 16.5   |      | 0        |            | 2.1    |          |   |
| HCM LOS  | C      |      |          |            |        |          |   |
|  |        |      |          |            |        |          |   |
| Minor Long/Maior M.  |        | NDT  | NDDV     | MDI := 414 | VDL 2  | CDI      |   |
| Minor Lane/Major Mvm   | Il     | NBT  | INRKA    | VBLn1V     | ARTU5  | SBL      |   |
| Capacity (veh/h)   |        | -    | -        | 319        | -      | 957      |   |
| HCM Lane V/C Ratio   |        | -    | -        | 0.022      |        | 0.109    |   |
| HCM Control Delay (s)  |        | -    | -        | 16.5       | 0      | 9.2      |   |
| HCM Lane LOS HCM 95th %tile Q(veh)   |        | -    | -        | 0.1        | A      | A<br>0.4 |   |
|  |        |      |          |            | _      |          |   |

| Intersection           |        |          |           |       |          |          |
|------------------------|--------|----------|-----------|-------|----------|----------|
| Int Delay, s/veh       | 0.5    |          |           |       |          |          |
|                        |        | WDD      | NDT       | NDD   | CDI      | CDT      |
| Movement               | WBL    | WBR      | NBT       | NBR   | SBL      | SBT      |
| Lane Configurations    | ^      | <b>7</b> | <b>\$</b> | 4.4   | <b>\</b> | <b>↑</b> |
| Traffic Vol, veh/h     | 0      | 12       | 525       | 11    | 34       | 279      |
| Future Vol, veh/h      | 0      | 12       | 525       | 11    | 34       | 279      |
| 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        | -         | -     | 300      | -        |
| Veh in Median Storage, |        | -        | 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      | 13       | 571       | 12    | 37       | 303      |
|                        |        |          |           |       |          |          |
| Major/Minor N          | linor1 | N        | /lajor1   | N     | Major2   |          |
| Conflicting Flow All   | -      | 577      | 0         | 0     | 583      | 0        |
| Stage 1                | _      | -        | -         | -     | -        | -        |
| Stage 2                | _      | _        | _         | _     | _        | _        |
| Critical Hdwy          |        | 6.22     |           |       | 4.12     | _        |
| Critical Hdwy Stg 1    | _      | 0.22     | _         |       | 4.12     |          |
| Critical Hdwy Stg 2    | -      | -        | -         |       | -        | -        |
| Follow-up Hdwy         | -      | 3.318    | -         | -     | 2.218    | -        |
| Pot Cap-1 Maneuver     | 0      | 516      | -         | -     | 991      |          |
|                        | 0      | 510      | -         | -     | 991      | -        |
| Stage 1                | 0      |          | -         | -     | -        |          |
| Stage 2                | U      | -        | -         | -     | -        | -        |
| Platoon blocked, %     |        | Г1/      | -         | -     | 001      | -        |
| Mov Cap-1 Maneuver     | -      | 516      | -         | -     | 991      | -        |
| Mov Cap-2 Maneuver     | -      | -        | -         | -     | -        | -        |
| Stage 1                | -      | -        | -         | -     | -        | -        |
| Stage 2                | -      | -        | -         | -     | -        | -        |
|                        |        |          |           |       |          |          |
| Approach               | WB     |          | NB        |       | SB       |          |
| HCM Control Delay, s   | 12.2   |          | 0         |       | 1        |          |
| HCM LOS                | В      |          |           |       | •        |          |
|                        |        |          |           |       |          |          |
|                        |        | NE       | NES       | VDI 1 | 05:      | 05-      |
| Minor Lane/Major Mvmt  |        | NBT      | NBRV      | VBLn1 | SBL      | SBT      |
| Capacity (veh/h)       |        | -        | -         | 010   | 991      | -        |
| HCM Lane V/C Ratio     |        | -        | -         | 0.025 |          | -        |
| HCM Control Delay (s)  |        | -        | -         |       | 8.8      | -        |
| HCM Lane LOS           |        | -        | -         | В     | Α        | -        |
| HCM 95th %tile Q(veh)  |        | -        | -         | 0.1   | 0.1      | -        |
|                        |        |          |           |       |          |          |

| Intersection                    |           |            |          |        |        |            |  |
|---------------------------------|-----------|------------|----------|--------|--------|------------|--|
| Int Delay, s/veh                | 0.9       |            |          |        |        |            |  |
| Movement                        | WBL       | WBR        | NBT      | NBR    | SBL    | SBT        |  |
| Lane Configurations             | NDL       | <b>WDK</b> | <u> </u> | 7      | JDL    | <u>ઝકા</u> |  |
| Traffic Vol, veh/h              | 27        | 110        | 291      | 10     | 50     | 499        |  |
| Future Vol, veh/h               | 27        | 110        | 291      | 10     | 50     | 499        |  |
| Conflicting Peds, #/hr          | 0         | 0          | 0        | 0      | 0      | 0          |  |
| Sign Control                    | Stop      | Stop       | Free     | Free   | Free   | Free       |  |
| RT Channelized                  | -         | Free       | -        | None   | -      | None       |  |
| Storage Length                  | 0         | 0          | _        | 0      | _      | -          |  |
| Veh in Median Storage           |           | -          | 0        | -      | -      | 0          |  |
| Grade, %                        | 0         | _          | 0        | _      | _      | 0          |  |
| Peak Hour Factor                | 92        | 92         | 92       | 92     | 92     | 92         |  |
| Heavy Vehicles, %               | 2         | 2          | 2        | 2      | 2      | 2          |  |
| Mymt Flow                       | 29        | 120        | 316      | 11     | 54     | 542        |  |
| WWITE I IOW                     | 27        | 120        | 310      |        | UΠ     | J7Z        |  |
|                                 |           |            |          |        |        |            |  |
|                                 | Minor1    | N          | /lajor1  |        | Major2 |            |  |
| Conflicting Flow All            | 966       | -          | 0        | 0      | 327    | 0          |  |
| Stage 1                         | 316       | -          | -        | -      | -      | -          |  |
| Stage 2                         | 650       | -          | -        | -      | -      | -          |  |
| Critical Hdwy                   | 6.42      | -          | -        | -      | 4.12   | -          |  |
| Critical Hdwy Stg 1             | 5.42      | -          | -        | -      | -      | -          |  |
| Critical Hdwy Stg 2             | 5.42      | -          | -        | -      | -      | -          |  |
| Follow-up Hdwy                  | 3.518     | -          | -        | -      | 2.218  | -          |  |
| Pot Cap-1 Maneuver              | 282       | 0          | -        | -      | 1233   | -          |  |
| Stage 1                         | 739       | 0          | -        | -      | -      | -          |  |
| Stage 2                         | 520       | 0          | -        | -      | -      | -          |  |
| Platoon blocked, %              |           |            | -        | -      |        | -          |  |
| Mov Cap-1 Maneuver              | 264       | -          | -        | -      | 1233   | -          |  |
| Mov Cap-2 Maneuver              | 379       | -          | -        | -      | -      | -          |  |
| Stage 1                         | 739       | -          | -        | -      | -      | -          |  |
| Stage 2                         | 487       | -          | -        | -      | -      | -          |  |
|                                 |           |            |          |        |        |            |  |
| Approach                        | WB        |            | NB       |        | SB     |            |  |
|                                 | 15.3      |            | 0        |        | 0.7    |            |  |
| HCM Control Delay, s<br>HCM LOS | 15.3<br>C |            | U        |        | U. /   |            |  |
| HOW LUS                         | C         |            |          |        |        |            |  |
|                                 |           |            |          |        |        |            |  |
| Minor Lane/Major Mvn            | nt        | NBT        | NBRV     | VBLn1V | VBLn2  | SBL        |  |
| Capacity (veh/h)                |           | -          | -        | 379    | -      | 1233       |  |
| HCM Lane V/C Ratio              |           | -          | -        | 0.077  | -      | 0.044      |  |
| HCM Control Delay (s)           | )         | -          | -        | 15.3   | 0      | 8.1        |  |
| HCM Lane LOS                    |           | -          | -        | С      | Α      | Α          |  |
| HCM 95th %tile Q(veh            | 1)        | -          | -        | 0.2    | -      | 0.1        |  |
|                                 |           |            |          |        |        |            |  |

| Intersection           |         |       |         |       |          |          |
|------------------------|---------|-------|---------|-------|----------|----------|
| Int Delay, s/veh       | 0.7     |       |         |       |          |          |
| Movement               | WBL     | WBR   | NBT     | NBR   | SBL      | SBT      |
| Lane Configurations    | WDL     | VVDIX | †       | NON   | JDL<br>Š | <u> </u> |
| Traffic Vol, veh/h     | 0       | 36    | 265     | 8     | 24       | 502      |
| Future Vol, veh/h      | 0       | 36    | 265     | 8     | 24       | 502      |
| Conflicting Peds, #/hr | 0       | 0     | 0       | 0     | 0        | 0        |
| Sign Control           | Stop    | Stop  | Free    | Free  | Free     | Free     |
| RT Channelized         | -<br>-  | None  | -       |       | -        | None     |
| Storage Length         |         | 0     | _       | -     | 300      | -        |
| 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        |
| Mymt Flow              | 0       | 39    | 288     | 9     | 26       | 546      |
| IVIVIIIL I IOW         | U       | 37    | 200     | 7     | 20       | 340      |
|                        |         |       |         |       |          |          |
|                        | /linor1 |       | /lajor1 |       | Major2   |          |
| Conflicting Flow All   | -       | 293   | 0       | 0     | 297      | 0        |
| Stage 1                | -       | -     | -       | -     | -        | -        |
| Stage 2                | -       | -     | -       | -     | -        | -        |
| Critical Hdwy          | -       | 6.22  | -       | -     | 4.12     | -        |
| Critical Hdwy Stg 1    | -       | -     | -       | -     | -        | -        |
| Critical Hdwy Stg 2    | -       | -     | -       | -     | -        | -        |
| Follow-up Hdwy         | -       | 3.318 | -       | -     | 2.218    | -        |
| Pot Cap-1 Maneuver     | 0       | 746   | -       | -     | 1264     | -        |
| Stage 1                | 0       | -     | -       | -     | -        | -        |
| Stage 2                | 0       | -     | -       | -     | -        | -        |
| Platoon blocked, %     |         |       | -       | -     |          | -        |
| Mov Cap-1 Maneuver     | -       | 746   | -       | -     | 1264     | -        |
| Mov Cap-2 Maneuver     | -       | -     | -       | -     | -        | -        |
| Stage 1                | -       | -     | -       | -     | -        | -        |
| Stage 2                | -       | -     | -       | -     | -        | -        |
|                        |         |       |         |       |          |          |
| Annroach               | WB      |       | NB      |       | SB       |          |
| Approach               |         |       |         |       |          |          |
| HCM Control Delay, s   | 10.1    |       | 0       |       | 0.4      |          |
| HCM LOS                | В       |       |         |       |          |          |
|                        |         |       |         |       |          |          |
| Minor Lane/Major Mvm   | t       | NBT   | NBRV    | VBLn1 | SBL      | SBT      |
| Capacity (veh/h)       |         | -     | -       | 746   | 1264     | -        |
| HCM Lane V/C Ratio     |         | -     | -       | 0.052 |          | -        |
| HCM Control Delay (s)  |         | -     | -       |       | 7.9      | -        |
| HCM Lane LOS           |         | -     | -       | В     | Α        | -        |
| HCM 95th %tile Q(veh)  |         | -     | -       | 0.2   | 0.1      | -        |
|                        |         |       |         |       |          |          |

| Intersection           |        |           |          |              |        |            |
|------------------------|--------|-----------|----------|--------------|--------|------------|
| Int Delay, s/veh       | 0.9    |           |          |              |        |            |
| Movement               | WBL    | WBR       | NBT      | NBR          | SBL    | SBT        |
| Lane Configurations    | 7      | <b>**</b> | <u> </u> | T T          | ODL    | <u>ઝકા</u> |
| Traffic Vol, veh/h     | 2      | 28        | 635      | 15           | 90     | 335        |
| Future Vol, veh/h      | 2      | 28        | 635      | 15           | 90     | 335        |
| · ·                    |        |           |          |              |        |            |
| Conflicting Peds, #/hr | 0      | 0         | 0        | 0            | 0      | 0          |
| Sign Control           | Stop   | Stop      | Free     | Free         | Free   | Free       |
| RT Channelized         | -      | Free      | -        | None         | -      | None       |
| Storage Length         | 100    | 0         | -        | 250          | -      | -          |
| Veh in Median Storage  | e, # 0 | -         | 0        | -            | -      | 0          |
| Grade, %               | 0      | -         | 0        | -            | -      | 0          |
| Peak Hour Factor       | 86     | 86        | 86       | 86           | 86     | 86         |
| Heavy Vehicles, %      | 2      | 2         | 2        | 2            | 2      | 2          |
| Mvmt Flow              | 2      | 33        | 738      | 17           | 105    | 390        |
| IVIVIII( I IOVV        | 2      | 33        | 730      | 17           | 103    | 370        |
|                        |        |           |          |              |        |            |
| Major/Minor N          | Minor1 | N         | /lajor1  | 1            | Major2 |            |
| Conflicting Flow All   | 1338   | -         | 0        | 0            | 755    | 0          |
| Stage 1                | 738    | _         | -        | -            | -      | -          |
| Stage 2                | 600    | _         | _        | _            | _      | -          |
| Critical Hdwy          | 6.42   | _         | _        | _            | 4.12   | _          |
| Critical Hdwy Stg 1    | 5.42   | _         | _        | _            | 1.12   | _          |
| Critical Hdwy Stg 2    | 5.42   | _         | -        | <del>-</del> | _      | _          |
| Follow-up Hdwy         | 3.518  | -         | -        | -            | 2.218  | -          |
|                        |        |           |          |              |        |            |
| Pot Cap-1 Maneuver     | 169    | 0         | -        | -            | 855    | -          |
| Stage 1                | 473    | 0         | -        | -            | -      | -          |
| Stage 2                | 548    | 0         | -        | -            | -      | -          |
| Platoon blocked, %     |        |           | -        | -            |        | -          |
| Mov Cap-1 Maneuver     | 142    | -         | -        | -            | 855    | -          |
| Mov Cap-2 Maneuver     | 278    | -         | -        | -            | -      | -          |
| Stage 1                | 473    | -         | -        | -            | -      | -          |
| Stage 2                | 462    | _         | -        | _            | _      | -          |
| Olago 2                | 102    |           |          |              |        |            |
|                        |        |           |          |              |        |            |
| Approach               | WB     |           | NB       |              | SB     |            |
| HCM Control Delay, s   | 18.1   |           | 0        |              | 2.1    |            |
| HCM LOS                | С      |           |          |              |        |            |
|                        |        |           |          |              |        |            |
|                        |        |           |          |              |        |            |
| Minor Lane/Major Mvm   | nt     | NBT       | NBRV     | VBLn1V       | VBLn2  | SBL        |
| Capacity (veh/h)       |        | -         | -        | 278          | -      | 855        |
| HCM Lane V/C Ratio     |        | -         | -        | 0.008        | -      | 0.122      |
| HCM Control Delay (s)  |        | -         | -        |              | 0      | 9.8        |
| HCM Lane LOS           |        | -         | -        | С            | A      | Α          |
| HCM 95th %tile Q(veh)  | )      | -         | -        | 0            | -      | 0.4        |
|                        |        |           |          |              |        |            |

| 1: S. Wilcox Street & Castle Rock Ford Access |
|---|
|   |

| Intersection           |        |      |          |              |         |       |
|------------------------|--------|------|----------|--------------|---------|-------|
| Int Delay, s/veh       | 0.6    |      |          |              |         |       |
| Movement               | WBL    | WBR  | NBT      | NBR          | SBL     | SBT   |
| Lane Configurations    | ሻ      | 7    | <b>†</b> | 7            |         | 4     |
| Traffic Vol., veh/h    | 15     | 110  | 320      | 10           | 50      | 590   |
| Future Vol, veh/h      | 15     | 110  | 320      | 10           | 50      | 590   |
| Conflicting Peds, #/hr | 0      | 0    | 0        | 0            | 0       | 0     |
| Sign Control           | Stop   | Stop | Free     | Free         | Free    | Free  |
| RT Channelized         | -      | Free | -        | None         | -       | None  |
| Storage Length         | 100    | 0    | _        | 250          | _       | -     |
| Veh in Median Storage  |        | -    | 0        | -            | _       | 0     |
| Grade, %               | 0      | _    | 0        | _            | _       | 0     |
| Peak Hour Factor       | 92     | 92   | 92       | 92           | 92      | 92    |
| Heavy Vehicles, %      | 2      | 2    | 2        | 2            | 2       | 2     |
| Mymt Flow              | 16     | 120  | 348      | 11           | 54      | 641   |
| WWITH FIOW             | 10     | 120  | 340      | 11           | 34      | 041   |
|                        |        |      |          |              |         |       |
| Major/Minor            | Minor1 |      | /lajor1  |              | /lajor2 |       |
| Conflicting Flow All   | 1097   | -    | 0        | 0            | 359     | 0     |
| Stage 1                | 348    | -    | -        | -            | -       | -     |
| Stage 2                | 749    | -    | -        | -            | -       | -     |
| Critical Hdwy          | 6.42   | -    | -        | -            | 4.12    | -     |
| Critical Hdwy Stg 1    | 5.42   | -    | _        | _            | -       | -     |
| Critical Hdwy Stg 2    | 5.42   | _    | -        | _            | -       | _     |
| Follow-up Hdwy         | 3.518  | _    | _        | _            | 2.218   | _     |
| Pot Cap-1 Maneuver     | 236    | 0    | _        | _            | 1200    | _     |
| Stage 1                | 715    | 0    | _        | _            | 1200    | _     |
| Stage 2                | 467    | 0    | _        | <del>-</del> | _       | _     |
| Platoon blocked, %     | 407    | U    |          | -            | -       |       |
|                        | 219    |      |          | -            | 1200    |       |
| Mov Cap-1 Maneuver     |        | -    |          |              |         | -     |
| Mov Cap-2 Maneuver     | 337    | -    | -        | -            | -       | -     |
| Stage 1                | 715    | -    | -        | -            | -       | -     |
| Stage 2                | 434    | -    | -        | -            | -       | -     |
|                        |        |      |          |              |         |       |
| Approach               | WB     |      | NB       |              | SB      |       |
| HCM Control Delay, s   | 16.2   |      | 0        |              | 0.6     |       |
| HCM LOS                | C      |      | U        |              | 0.0     |       |
| TIOWI LOO              |        |      |          |              |         |       |
|                        |        |      |          |              |         |       |
| Minor Lane/Major Mvm   | nt     | NBT  | NBRV     | VBLn1V       | /BLn2   | SBL   |
| Capacity (veh/h)       |        | -    | -        | 337          | -       | 1200  |
| HCM Lane V/C Ratio     |        | -    | -        | 0.048        | -       | 0.045 |
| HCM Control Delay (s)  |        | -    | -        | 16.2         | 0       | 8.1   |
| HCM Lane LOS           |        | _    | -        | С            | A       | Α     |
| HCM 95th %tile Q(veh   | )      |      | -        | 0.2          | -       | 0.1   |
|                        |        |      |          |              |         |       |

| - | _  | - | _ |   |    |  |
|---|----|---|---|---|----|--|
|   | A۱ | N | Ρ | e | ak |  |
|   |    |   | - | _ |    |  |

| 0.9     |                                    |  |   |  |  |
|---------|------------------------------------|--|---|--|--|
| WBL     | WBR                                | NBT  | NBR   | SBL  | SBT  |
| ች       |                                    |  |   |  | <b>↑</b>   |
| 6       | 28                                 | 647  | 15  | 90   | 369  |
| 6       | 28                                 | 647  | 15  |  | 369  |
|         |                                    |  | 0   |  | 0  |
|         |                                    |  | Free  |  | Free   |
|         |                                    | -  |   | -  | None   |
| 100     |                                    | _  |   | 300  | -  |
|         | -                                  | 0  | -   | -  | 0  |
|         |                                    |  |   | _  | 0  |
|         |                                    |  |   |  | 86   |
|         |                                    |  |   |  | 2  |
|         |                                    |  |   |  | 429  |
| 1       | 33                                 | 752  | 17  | 105  | 429  |
|         |                                    |  |   |  |  |
| /linor1 | N                                  | /lajor1  | N   | /lajor2  |  |
| 1391    | -                                  | 0  | 0   | 769  | 0  |
|         | -                                  | -  | -   | -  | -  |
| 639     | -                                  | -  | -   | -  | -  |
|         | -                                  | -  | -   | 4.12   | -  |
|         | _                                  | _  | _   | _  | _  |
|         | _                                  | _  | _   | _  | _  |
|         |                                    |  | _   | 2 218  | _  |
|         |                                    |  |   |  | _  |
|         |                                    |  |   | 043  | _  |
|         |                                    |  | -   | -  |  |
| 520     | U                                  | -  | -   | -  | -  |
| 400     |                                    | -  | -   | 0.45   | -  |
|         |                                    | -  | -   | 845  | -  |
|         | -                                  | -  | -   | -  | -  |
|         | -                                  | -  | -   | -  | -  |
| 461     | -                                  | -  | -   | -  | -  |
|         |                                    |  |   |  |  |
| WR      |                                    | MR   |   | SR   |  |
|         |                                    |  |   |  |  |
|         |                                    | U  |   | 1.9  |  |
| C       |                                    |  |   |  |  |
|         |                                    |  |   |  |  |
| t       | NBT                                | NBRV   | VBLn1V  | /BLn2  | SBL  |
|         | -                                  | -  | 275   | -  | 845  |
|         | _                                  | _  | 0.025   | _  | 0.124  |
|         |                                    |  |   | 0  | 9.9  |
|         | -                                  | -  | 10.4  |  |  |
|         | -                                  | -  |   |  |  |
|         | -                                  |  | C 0.1   | A  | A<br>0.4   |
|         | WBL 6 6 0 Stop - 100 ,# 0 0 86 2 7 | WBL WBR 6 28 6 28 0 0 0 Stop Stop - Free 100 0 ,# 0 - 0 - 86 86 2 2 7 33  Minor1 N 1391 - 752 - 639 - 6.42 - 5.42 - 5.42 - 5.42 - 3.518 - 157 0 466 0 526 0  138 - 275 - 466 - 461 - WB 18.4 C | WBL         WBR         NBT           6         28         647           0         0         0           Stop         Stop         Free           -         Free         -           100         0         -           ,#         0         -         0           86         86         86         2           2         2         2         2           7         33         752    Minor1  Major1  1391  - 0  752  - 639  - 0  6.42  - 1  5.42  - 2  5.42  - 3.518  - 1  57  0  - 466  0  - 526  0  - 1  138  - 275  - 466  - 461  - 3  WB  NB  18.4  0  C  this is a constant of the | WBL         WBR         NBT         NBR           6         28         647         15           6         28         647         15           0         0         0         0           Stop         Stop         Free         Free           -         Free         -         None           100         0         -         250           ,#         0         -         0         -           0         -         0         -         -           86         86         86         86         86           2         2         2         2         2           7         33         752         17         7           Minor1         Major1         Major1         Major1         Major1         Major1         Major1         Major2         Major3         Major3 | WBL         WBR         NBT         NBR         SBL           Image: Control of the part |

| 1.51                                    |           |             |            |       |        |              |
|---|-----------|-------------|------------|-------|--------|--------------|
| Int Delay, s/veh                        | 0.4       |             |            |       |        |              |
| Movement                                | WBL       | WBR         | NBT        | NBR   | SBL    | SBT          |
| Lane Configurations                     | VVDL      | VVDIX       | <b>1</b> } | אטוי  | JDL    | <u> </u>     |
| Traffic Vol, veh/h                      | 0         | 12          | 650        | 11    | 34     | <b>T</b> 339 |
| Future Vol, veh/h                       |           |             |            |       |        |              |
| <u>'</u>                                | 0         | 12          | 650        | 11    | 34     | 339          |
| 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           | -          | -     | 300    | -            |
| Veh in Median Storag                    | e,# 0     | -           | 0          | -     | -      | 0            |
| Grade, %                                | 0         | -           | 0          | -     | -      | 0            |
| Peak Hour Factor                        | 90        | 90          | 90         | 90    | 90     | 90           |
| Heavy Vehicles, %                       | 2         | 2           | 2          | 2     | 2      | 2            |
| Mvmt Flow                               | 0         | 13          | 722        | 12    | 38     | 377          |
|   |           |             |            |       |        |              |
|   |           |             |            |       |        |              |
|   | Minor1    |             | Major1     |       | Major2 |              |
| Conflicting Flow All                    | -         | 728         | 0          | 0     | 734    | 0            |
| Stage 1                                 | -         | -           | -          | -     | -      | -            |
| Stage 2                                 | -         | -           | -          | -     | -      | -            |
| Critical Hdwy                           | -         | 6.22        | -          | -     | 4.12   | -            |
| Critical Hdwy Stg 1                     | -         | -           | -          | -     | -      | -            |
| Critical Hdwy Stg 2                     | -         | -           | -          | -     | -      | -            |
| Follow-up Hdwy                          | -         | 3.318       | -          | -     | 2.218  | -            |
| Pot Cap-1 Maneuver                      | 0         | 423         | -          | _     | 871    | _            |
| Stage 1                                 | 0         | -           | _          | _     | -      | _            |
| Stage 2                                 | 0         | -           | _          | _     | _      | _            |
| Platoon blocked, %                      | U         |             | _          | _     |        | _            |
| Mov Cap-1 Maneuver                      | _         | 423         |            | -     | 871    | <del>-</del> |
|   |           |             | -          | -     | 0/1    | -            |
| Mov Cap-2 Maneuver                      |           | -           | -          | -     | -      | -            |
| Stage 1                                 | -         | -           | -          | -     | -      | -            |
| Stage 2                                 | -         | -           | -          | -     | -      | -            |
|   |           |             |            |       |        |              |
| Approach                                | WB        |             | NB         |       | SB     |              |
| HCM Control Delay, s                    |           |             | 0          |       | 0.8    |              |
| HCM LOS                                 | 13.0<br>B |             | U          |       | 0.0    |              |
| HCIVI LU3                               | D         |             |            |       |        |              |
|   |           |             |            |       |        |              |
| Minor Lane/Major Mvr                    | nt        | NBT         | NBRV       | VBLn1 | SBL    | SBT          |
|   |           | _           | _          | 423   | 871    | _            |
| Capacity (veh/h)                        |           |             |            |       | 0.043  | _            |
| Capacity (veh/h) HCM Lane V/C Ratio     |           | -           | -          |       |        |              |
| HCM Lane V/C Ratio                      | )         | -           |            |       |        | _            |
| HCM Lane V/C Ratio HCM Control Delay (s | )         | -           | -          | 13.8  | 9.3    | -            |
| HCM Lane V/C Ratio                      |           | -<br>-<br>- |            |       |        | -            |

| Int Delay, s/veh      |              |       |            |        |          |              |   |
|-----------------------|--------------|-------|------------|--------|----------|--------------|---|
| in Dolay, Siven       | 0.8          |       |            |        |          |              |   |
| Movement              | WBL          | WBR   | NBT        | NBR    | SBL      | SBT          | J |
| Lane Configurations   |              | VVDIX | <u>ND1</u> | NDK ** | JDL<br>Š | <u> </u>     |   |
| Traffic Vol, veh/h    | 27           | 110   | 356        | 10     | 50       | <b>T</b> 614 |   |
| Future Vol, veh/h     |              |       |            |        |          |              |   |
|                       | 27           | 110   | 356        | 10     | 50       | 614          |   |
| Conflicting Peds, #/h |              | 0     | 0          | 0      | 0        | 0            |   |
| Sign Control          | Stop         | Stop  | Free       | Free   | Free     | Free         |   |
| RT Channelized        | -            | Free  | -          | None   | -        | None         |   |
| Storage Length        | 100          | 0     | -          | 250    | 300      | -            |   |
| Veh in Median Stora   | •            | -     | 0          | -      | -        | 0            |   |
| Grade, %              | 0            | -     | 0          | -      | -        | 0            |   |
| Peak Hour Factor      | 90           | 90    | 90         | 90     | 90       | 90           |   |
| Heavy Vehicles, %     | 2            | 2     | 2          | 2      | 2        | 2            |   |
| Mvmt Flow             | 30           | 122   | 396        | 11     | 56       | 682          |   |
| TVI-VIIIC I TOVV      | - 50         | 122   | 070        | - 11   | 50       | 002          |   |
|                       |              |       |            |        |          |              |   |
| Major/Minor           | Minor1       | Λ     | Major1     | N      | Major2   |              |   |
| Conflicting Flow All  | 1190         | _     | 0          | 0      | 407      | 0            |   |
| Stage 1               | 396          | _     | -          | -      | -        | -            |   |
| Stage 2               | 794          | _     | _          | _      | _        | _            |   |
| Critical Hdwy         | 6.42         | -     | -          | -      | 4.12     | -            |   |
| ,                     | 5.42         |       | -          |        |          |              |   |
| Critical Hdwy Stg 1   |              | -     | -          | -      | -        | -            |   |
| Critical Hdwy Stg 2   | 5.42         | -     | -          | -      | -        | -            |   |
| Follow-up Hdwy        | 3.518        | -     | -          |        | 2.218    | -            |   |
| Pot Cap-1 Maneuve     |              | 0     | -          | -      | 1152     | -            |   |
| Stage 1               | 680          | 0     | -          | -      | -        | -            |   |
| Stage 2               | 445          | 0     | -          | -      | -        | -            |   |
| Platoon blocked, %    |              |       | -          | -      |          | -            |   |
| Mov Cap-1 Maneuve     | er 197       | -     | -          | -      | 1152     | -            |   |
| Mov Cap-2 Maneuve     |              | -     | -          | -      | -        | -            |   |
| Stage 1               | 680          | _     | _          | _      | -        | _            |   |
| Stage 2               | 423          | _     | _          | _      |          | _            |   |
| Staye 2               | 423          | -     | -          | -      | _        |              |   |
|                       |              |       |            |        |          |              |   |
| Approach              | WB           |       | NB         |        | SB       |              |   |
| HCM Control Delay,    |              |       | 0          |        | 0.6      |              |   |
| HCM LOS               | 3 17.4<br>C  |       | U          |        | 0.0      |              |   |
| I IOIVI LOS           | C            |       |            |        |          |              |   |
|                       |              |       |            |        |          |              |   |
| Minor Lane/Major M    | vmt          | NBT   | NBRV       | VBLn1V | VBLn2    | SBL          |   |
| Capacity (veh/h)      |              | _     | -          | 320    | _        | 1152         |   |
| HCM Lane V/C Ratio    | 0            | _     |            | 0.094  |          | 0.048        |   |
| HCM Control Delay     |              | -     |            | 17.4   | 0        | 8.3          |   |
| HCM Lane LOS          | (3)          |       | -          |        |          |              |   |
| HCM 95th %tile Q(v    | o <b>h</b> \ | -     |            | C      | А        | A            |   |
| HUM YAIN WILL ()(V    | en)          | -     | -          | 0.3    | -        | 0.2          |   |
| 110W 75W 70W Q(V      |              |       |            |        |          |              |   |

| Intersection             |        |          |        |          |          |          |
|--------------------------|--------|----------|--------|----------|----------|----------|
| Int Delay, s/veh         | 0.6    |          |        |          |          |          |
| Movement                 | WBL    | WBR      | NBT    | NBR      | SBL      | SBT      |
|                          | WBL    |          |        | NDK      |          |          |
| Lane Configurations      |        |          | 7      |          | <u>ነ</u> | <b>†</b> |
| Traffic Vol, veh/h       | 0      | 36       | 330    | 8        | 24       | 617      |
| Future Vol, veh/h        | 0      | 36       | 330    | 8        | 24       | 617      |
| Conflicting Peds, #/hr   |        | 0        | 0      | 0        | 0        | 0        |
| Sign Control             | Stop   | Stop     | Free   | Free     | Free     | Free     |
| RT Channelized           | -      | None     | -      | None     | -        | None     |
| Storage Length           | -      | 0        | -      | -        | 300      | -        |
| Veh in Median Storag     | je,# 0 | -        | 0      | -        | -        | 0        |
| Grade, %                 | 0      | -        | 0      | -        | -        | 0        |
| Peak Hour Factor         | 90     | 90       | 90     | 90       | 90       | 90       |
| Heavy Vehicles, %        | 2      | 2        | 2      | 2        | 2        | 2        |
| Mvmt Flow                | 0      | 40       | 367    | 9        | 27       | 686      |
| IVIVIIILI IOVV           | - 0    | UT       | 307    |          | 21       | 000      |
|                          |        |          |        |          |          |          |
| Major/Minor              | Minor1 | <u> </u> | Najor1 | <u> </u> | Major2   |          |
| Conflicting Flow All     | -      | 372      | 0      | 0        | 376      | 0        |
| Stage 1                  | -      | -        | -      | -        | -        | -        |
| Stage 2                  | _      | _        | _      | _        | _        | _        |
| Critical Hdwy            | _      | 6.22     | _      | -        | 4.12     | _        |
| Critical Hdwy Stg 1      |        | 0.22     | _      |          | 4.12     |          |
|                          | -      | -        |        | -        |          |          |
| Critical Hdwy Stg 2      | -      | 2 210    | -      | -        | 2 210    | -        |
| Follow-up Hdwy           | -      | 3.318    | -      | -        | 2.218    | -        |
| Pot Cap-1 Maneuver       | 0      | 674      | -      | -        | 1182     | -        |
| Stage 1                  | 0      | -        | -      | -        | -        | -        |
| Stage 2                  | 0      | -        | -      | -        | -        | -        |
| Platoon blocked, %       |        |          | -      | -        |          | -        |
| Mov Cap-1 Maneuver       |        | 674      | -      | -        | 1182     | -        |
| Mov Cap-2 Maneuver       |        | -        | -      | -        | -        | -        |
| Stage 1                  | -      | -        | -      | -        | -        | -        |
| Stage 2                  | _      | _        | _      | _        | _        | _        |
| 5.0.go 2                 |        |          |        |          |          |          |
|                          |        |          |        |          |          |          |
| Approach                 | WB     |          | NB     |          | SB       |          |
| HCM Control Delay, s     | 10.7   |          | 0      |          | 0.3      |          |
| HCM LOS                  | В      |          |        |          |          |          |
|                          |        |          |        |          |          |          |
|                          |        |          |        |          |          |          |
| Minor Lane/Major Mv      | mt     | NBT      | NBRV   | VBLn1    | SBL      | SBT      |
| Capacity (veh/h)         |        | -        | -      | 674      | 1182     | -        |
| HCM Lane V/C Ratio       |        | -        | -      | 0.059    |          | -        |
| HCM Control Delay (s     |        | -        | -      |          | 8.1      | -        |
| HCM Lane LOS             | 7      | _        | _      | В        | A        | _        |
| HCM 95th %tile Q(vel     | h)     |          | _      | 0.2      | 0.1      | _        |
| 1101VI 73111 701116 Q(VE | 11)    |          |        | 0.2      | U. I     | _        |
|                          |        |          |        |          |          |          |