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Maltese Point  
Transportation Memorandum  
PCD File No. PPR2124  
(LSC #S214220)  
November 17, 2021

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

JEFFREY C. HODSDON

11/17/2021

Date

# **Ruckus Development**

## **Transportation Memorandum**

Prepared for:  
Nick Sallecchia  
12027 Norma Kate Lane  
Peyton, CO 80831

NOVEMBER 17, 2021

---

LSC Transportation Consultants  
Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S214220  
PCD File No. PPR2124



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November 17, 2021

Nick Sallecchia  
12027 Norma Kate Lane  
Peyton, CO 80831

RE: Maltese Point  
Transportation Memorandum  
El Paso County, CO  
LSC #204440

Dear Mr. Sallecchia,

LSC Transportation Consultants, Inc. has prepared this transportation memorandum for the proposed office/warehouse development in the Rolling Thunder Business Park located in El Paso County, Colorado. The proposed development will be located on El Paso County parcel 5311101011. The site is northwest of the intersection of Rolling Thunder Way/Firehouse View. Two 10,800 square foot office/warehouse buildings are proposed for a total of 21,600 square feet. This report presents the estimated vehicle-trip generation for the proposed development. This report has been prepared for submittal to El Paso County.

## **REPORT CONTENTS**

The preparation of this report included the following:

- Inventory of the existing adjacent and nearby roadway system. This includes functional classifications, street widths, lane configurations, intersection traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary left- and right-turn lanes, intersection sight distances, etc.;
- A review of the proposed site land use and access locations;
- Morning and evening peak-hour traffic volumes at the intersections of Firehouse View/Maltese Point, Firehouse View/Rolling Thunder Way, and Golden Sage Road/Woodmen Road;
- Estimates of short- and long-term background traffic volumes and total traffic (site traffic plus background traffic). Forecasts include buildout of adjacent proposed developments;
- Estimates of the daily and peak-hour trip generation for the proposed land use;
- The estimated directional distribution of site-generated vehicle trips on the study-area roadway system;

- Projections of peak-hour site-generated turning-movement traffic volumes at the study-area intersections;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of the short-term and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes and/or the adequacy of existing lanes at the site access-point intersections and the other study-area intersections; and
- Findings and recommendations.

## RECENT TRAFFIC REPORTS

The site was previously studied as part of the *Rolling Thunder Business Park Traffic Impact Analysis*, May 2008, LSC.

The following traffic reports were utilized in the preparation of this report:

- *Rolling Thunder Lots 2-3*, January 2021
- *Falcon Meadows at Bent Grass*, December 2020
- *Black Forest Beverage Company*, May 2020
- *Bent Grass Residential Filing No. 2*, April 2020

## PROPOSED LAND USE/SITE ACCESS

Figure 1 shows the site location relative to the adjacent and nearby roadways. The site is a development of a lot located in the previously approved Rolling Thunder Business Park. The lot is planned to have two 10,800-square-foot office/warehouse buildings for a total of 21,600 square-feet with access onto Maltese Point. From Maltese Point, vehicles can access Rolling Thunder Way via Firehouse View.

Figure 2 shows the site plan and proposed access points. As shown, there are two proposed site access points with one onto Maltese Point and the other onto Firehouse View. Both accesses are full-movement. The intersections of Maltese Point/Firehouse View and Rolling Thunder Way/Firehouse View are also full-movement with two-way stop control.

## ROAD AND TRAFFIC CONDITIONS

Streets adjacent to the site are identified below, followed by a brief description of each:

**Maltese Point** is a private local road. The roadway extends approximately 375 feet to the west from Firehouse View Road and 305 feet to the east, ending in a cul-de-sac on both sides.

**Firehouse View** is a private local road. The roadway extends approximately 275 feet, intersecting Maltese Point to the north and Rolling Thunder Way to the south.

**Rolling Thunder Way** is a two-lane, Urban Non-Residential Collector that runs east/west between Golden Sage Road and Meridian Road. The posted speed limit along this corridor is 35 miles per hour (mph). There is a striped two-way left-turn lane at the intersection with Firehouse View.

**Golden Sage Road** is a two-lane, Urban Non-Residential Collector that runs north/south between Rolling Thunder Way and the frontage road to the north of Woodmen Road. Currently, the roadway turns into Rolling Thunder Way on the south end. When the parcel to the west of Golden Sage Road is developed, Rolling Thunder Way will be extended and this will become an unsignalized T-intersection.

**Woodmen Road** is an east/west Expressway through the northern portion of the City of Colorado Springs and El Paso County. Woodmen Road is a four-lane facility adjacent to the study area. The posted speed limit on Woodmen Road in the vicinity of the site is 55 miles per hour (mph). The intersection with Golden Sage Road is signalized.

### **Traffic Volumes**

The signalized intersection of Golden Sage Road/Woodmen Road was counted in January 2020 and again in December 2020. Traffic counts were conducted in July 2020 at the unsignalized study intersections. The most recent counts at the Golden Sage/Woodmen Road intersection and both unsignalized intersections were conducted during the COVID-19 pandemic, which may have affected traffic volumes. To correct for potentially low traffic volumes, the older count at the Golden Sage Road/Woodmen Road was used for the analysis. Additionally, the through volumes at the Rolling Thunder Way/Firehouse View were increased to balance with traffic volumes at the intersection of Golden Sage Road/Woodmen Road. It is difficult to know if volumes turning into and out of the Rolling Thunder Business Park were also impacted by the pandemic. At the time of the count, the businesses appeared to be open. Therefore, these volumes were left as counted. Figure 3 provides the peak-hour traffic volumes and estimated weekday daily traffic.

### **TRIP GENERATION ESTIMATE**

Estimates of the vehicle trips projected to be generated by the proposed site have been made using the nationally published average trip-generation rates in *Trip Generation, 10<sup>th</sup> Edition, 2017* by the Institute of Transportation Engineers (ITE). The land use code 710 General Office Building was used to calculate site-generated traffic.

Table 1 below presents a summary of the estimated site trip generation for the proposed development. A detailed trip-generation estimate for the site, including ITE rates and building square footage, is presented in Table 5 (attached).

**Table 1: Estimated Site Vehicle-Trip Generation – Office Building**

| Analysis Period                             | <u>Weekday</u> |     |       |
|---|----------------|-----|-------|
|   | In             | Out | Total |
| Morning peak hour (vehicle trips/hour)      | 28             | 4   | 32    |
| Evening peak hour (vehicle trips/hour)      | 6              | 25  | 31    |
| Weekday – 24-hour total (vehicle trips/day) | 105            | 105 | 210   |

Based on the ITE estimate for the proposed development, the site would generate approximately 210 vehicle trips on the average weekday, with half entering and half exiting the site. Approximately 28 entering vehicles and 4 exiting vehicles are projected for the weekday morning peak hour and 6 entering vehicles and 25 exiting vehicles are projected for the weekday evening peak hour.

Traffic counts were completed in July 2020 at the intersection of Firehouse View/Rolling Thunder Way to estimate how much traffic is currently generated by the existing business park. The current counts, along with trip-generation estimates in the *Black Forest Beverage Company Trip Generation Memo* prepared in May 2020, *Rolling Thunder Lots 2-3* prepared in January 2021, and the trip generation forecast for the proposed development were used to develop a trip-generation forecast for the entire business park. Table 2 provides the overall trip-generation estimate for the Rolling Thunder Business Park. The attached Table 6 provides the detailed trip-generation estimate. As shown, with the proposed office/warehouse buildings, the previously proposed shopping center and brewery, and the existing trips generated by the business park, the Rolling Thunder Business Park is projected to generate 88 trips during the morning peak hour and 162 trips during the evening peak hour.

**Table 2: Rolling Thunder Business Park (All Parcels)  
Trip Generation**

| Analysis Period                             | <u>Weekday</u> |     |       |
|---|----------------|-----|-------|
|   | In             | Out | Total |
| Morning peak hour (vehicle trips/hour)      | 68             | 20  | 88    |
| Evening peak hour (vehicle trips/hour)      | 62             | 100 | 162   |
| Weekday – 24-hour total (vehicle trips/day) | 702            | 702 | 1,404 |

The previously-approved use of the business park included 94,500 square feet of business-park land use, which would include a mix of office, retail, light industrial, and warehouse, as well as a 5,000-square-foot shopping center. The attached Table 7 provides a summary of the site-generated traffic volumes that were projected in the previous Rolling Thunder Business Park traffic study that included all parcels within the business park (*Rolling Thunder Business Park Updated Traffic Impact Study*, May 2008).

Table 3 provides a comparison to trip-generation estimates for the previously-approved land use for all parcels within the business park and the current trip-generation estimates for the business park. As

shown, the proposed land use is anticipated to generate less traffic than the previous land use. The business park would generate approximately 286 fewer vehicle trips on the average weekday, with half entering and half exiting the site. Approximately 65 fewer vehicles will enter or exit the site during the morning peak hour and 6 fewer vehicles will enter or exit the site during the evening peak hour.

**Table 3: Rolling Thunder Business Park (All Parcels)**  
**Trip Generation Comparison**

| Land Use                                | Daily       | <u>Morning Peak</u> |            | <u>Evening Peak</u> |            |
|---|-------------|---------------------|------------|---------------------|------------|
|   |             | In                  | Out        | In                  | Out        |
| Proposed Land Use (Table 6)             | 1,404       | 68                  | 20         | 62                  | 100        |
| Previously Estimated Land Use (Table 7) | 1,690       | 123                 | 30         | 52                  | 116        |
| <b>Difference</b>                       | <b>-286</b> | <b>-55</b>          | <b>-10</b> | <b>10</b>           | <b>-16</b> |

## BACKGROUND TRAFFIC

Background traffic includes growth that is projected to occur on the study roadways, due to future development in the area. Background volumes do not include projected traffic to be generated by the proposed development. Long-term volumes were estimated by LSC, based on previous work completed in the area by LSC, including *Falcon Meadows at Bent Grass*, *Bent Grass Meadows*, and *Falcon Marketplace*. The 2040 background traffic volumes assume buildout of the area north of Woodmen Road and west of Meridian Road. Figure 4 provides the calculated long-term background traffic volumes.

It is anticipated that, by the year 2040, the west leg of the intersection of Golden Sage Road/Rolling Thunder Way would likely be constructed and carry traffic. However, this was not included in this analysis. It is expected that the development to the west would need to submit a traffic impact study to address impacts to the study intersections, including Golden Sage Road/Rolling Thunder Way.

## TRIP DISTRIBUTION AND ASSIGNMENT

### Trip Directional Distribution

Estimation of the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 5 shows the directional distribution estimates for the proposed development. Estimates were based on the following factors: existing traffic counts, existing area development, and the area roadway system. As shown, it has been assumed that 80 percent of site-generated traffic would travel to/from Woodmen Road.



### Site-Generated Traffic

Site-generated traffic volumes at the study intersections have been calculated by applying the directional-distribution percentages estimated by LSC to the trip-generation estimates (from Table 5). Figure 5 provides the site-generated traffic for the site.

### Short-Term Total Traffic Volumes

Figure 6 shows the sum of the existing traffic volumes (from Figure 3) and the site-generated peak-hour traffic volumes for the development (shown in Figure 5). As mentioned previously, the through volumes at the intersection of Rolling Thunder Way/Firehouse View were increased to balance with volumes at Golden Sage Road/Woodmen Road. This was done to try to correct for the traffic impacts of the COVID-19 pandemic. The resulting volumes represent the projected short-term total traffic following construction of development.

### Long-Term Total Traffic Volumes

Figure 7 shows the projected 2040 total traffic volumes, which are the sum of 2040 background traffic volumes (from Figure 4) plus the site-generated traffic volumes (from Figure 5).

### LEVEL OF SERVICE ANALYSIS

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 4 shows the level of service delay ranges for signalized and unsignalized intersections.

**Table 4: Intersection Levels of Service Delay Ranges**

| Level of Service   | Signalized Intersections                    | Unsignalized Intersections                                 |
|--|---|--|
|  | Average Control Delay (seconds per vehicle) | Average Control Delay (seconds per vehicle) <sup>(1)</sup> |
| A  | 10.0 sec or less                            | 10.0 sec or less   |
| B  | 10.1-20.0 sec                               | 10.1-15.0 sec  |
| C  | 20.1-35.0 sec                               | 15.1-25.0 sec  |
| D  | 35.1-55.0 sec                               | 25.1-35.0 sec  |
| E  | 55.1-80.0 sec                               | 35.1-50.0 sec  |
| F  | 80.1 sec or more                            | 50.1 sec or more   |
| (1) For unsignalized intersections if V/C ratio is greater than 1.0 the level of service is LOS F regardless of the projected average control delay per vehicle. |   |  |

The study intersections have been analyzed to determine the projected control delay and corresponding levels of service for turning movements. Figure 3 provides the existing levels of service. Figure 4 provides the background levels of service for the long-term scenarios. Figure 6 and Figure 7 provide the levels of service for the short-term and long-term total traffic scenarios, respectively.

### **Golden Sage Road/Woodmen Road**

The signalized intersection of Golden Sage Road/Woodmen Road currently operates at LOS B during the peak hours, with all movements operating at LOS D or better. In the short-term total, the levels of service experienced at the intersection are expected to remain unchanged with the addition of the site-generated traffic.

In the long-term background, this intersection is projected to operate at LOS C during the morning and evening peak hours. All movements are expected to operate at LOS D or better. With the addition of the site-generated traffic, the level of service experienced at the intersection is expected to remain unchanged.

### **Firehouse View Intersections**

All yielding turning movements at the unsignalized study intersections are projected to operate at LOS C or better during both peak hours in all existing and future scenarios.

### **AUXILIARY TURN LANES**

No additional auxiliary lanes are necessary with this proposed development.

### **MTCP ROADWAY IMPROVEMENTS**

The *2016 El Paso County Major Transportation Corridor Plan* does not show any planned improvements in the study area.

### **PEDESTRIAN AND BICYCLE ACCOMMODATION**

There is currently no sidewalk along Maltese Point or Firehouse View. There is an incomplete segment of sidewalk along the east side of Golden Sage Road, but no sidewalk on the west side. In the *2016 El Paso County Major Transportation Corridor Plan* (MTCP), Woodmen Road is shown as a non-motorized priority corridor with proposed bicycle routes.

## **COUNTY ROAD IMPROVEMENT FEE PROGRAM**

### **Transportation Impact Fees**

Transportation impact fees are not required to be paid to El Paso County. Rather, applicable fees will need to be paid to the Woodmen Road District pursuant to the agreement between El Paso County and the Woodmen Road District.

### **Reimbursable MTCP Improvements**

There are no apparent reimbursable improvements programmed in the MTCP in the general vicinity of this site.

## **FINDINGS AND CONCLUSIONS**

### **Trip Generation**

- The development is expected to generate approximately 210 vehicle trips on the average weekday with approximately 32 trips occurring during the morning peak hour and 31 trips during the evening peak hour.

### **Recommendations**

- No additional auxiliary lanes or other improvements are required for the proposed development.
- 

### **Woodmen Road District Fees**

Applicable fees will need to be paid to the Woodmen Road District pursuant to the agreement between El Paso County and the Woodmen Road District.

\* \* \* \* \*

Please contact me if you have any questions.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.  
Principal

JCH/jas

Enclosures: Tables 5-7  
Figures 1-7  
Traffic Counts  
Level of Service Reports

# Tables

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### Table 5: Detailed Trip Generation – Proposed Site

| Land Use Code   | Land Use Description    | Trip Generation Units   | Trip Generation Rates <sup>(1)</sup>   |                   |      |                     |      |                         | Total Trips Generated |     |                     |    |  |
|---|-------------------------|-------------------------|--|-------------------|------|---------------------|------|-------------------------|-----------------------|-----|---------------------|----|--|
|   |                         |                         | Average Weekday Traffic <sup>(3)</sup> | Morning Peak Hour |      | Afternoon Peak Hour |      | Average Weekday Traffic | Morning Peak Hour     |     | Afternoon Peak Hour |    |  |
|   |                         |                         |  | In                | Out  | In                  | Out  |                         | In                    | Out |                     |    |  |
|   |                         |                         |  |                   |      |                     |      |                         |                       |     |                     |    |  |
| 710   | General Office Building | 21.6 KSF <sup>(2)</sup> | 9.74                                   | 1.29              | 0.18 | 0.26                | 1.16 | 210                     | 28                    | 4   | 6                   | 25 |  |
| Notes:<br>(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)<br>(2) KSF = 1,000 Square Feet |                         |                         |  |                   |      |                     |      |                         |                       |     |                     |    |  |
| Source: LSC Transportation Consultants, Inc.  |                         |                         |  |                   |      |                     |      |                         |                       |     |                     |    |  |

**Table 6: Detailed Trip Generation – Rolling Thunder Business Park (All Parcels)**

| Table 1: Trip Generation Rates and Total Trips Generated   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
|--|-------------------------|-------------------------|-----------------------|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|----------------------|-----------------------|------------------------|
| Land Use   |                         | Land Use Description    | Trip Generation Units | Trip Generation Rates <sup>(1)</sup>   |                      |                       |                        | Total Trips Generated   |                         |                      |                       |                        |
|  |                         |                         |                       | Average Weekday Traffic <sup>(3)</sup> | Morning Peak Hour In | Morning Peak Hour Out | Afternoon Peak Hour In | Afternoon Peak Hour Out | Average Weekday Traffic | Morning Peak Hour In | Morning Peak Hour Out | Afternoon Peak Hour In |
| Code   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| Proposed Land Use  |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| 710  | General Office Building | 21.6 KSF <sup>(2)</sup> | 9.74                  | 1.29                                   | 0.18                 | 0.26                  | 1.16                   | 210                     | 28                      | 4                    | 6                     | 25                     |
| Other Proposed Land Uses Within Rolling Thunder <sup>(3)</sup>                                       |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| 820  | Shopping Center         | 7.5 KSF                 | 37.75                 | 1.62                                   | 1.38                 | 2.11                  | 2.11                   | 283                     | 12                      | 10                   | 16                    | 16                     |
| 925  | Drinking Place          | 1.383 KSF               | 56.09                 | 0.00                                   | 0.00                 | 7.50                  | 3.86                   | 78                      | 0                       | 0                    | 10                    | 5                      |
| 140  | Manufacturing           | 2.27 KSF                | 3.93                  | 0.48                                   | 0.14                 | 0.21                  | 0.46                   | 9                       | 1                       | 0                    | 0                     | 1                      |
| 492  | Health/Fitness Club     | 1.15 KSF                | 28.82                 | 0.67                                   | 0.64                 | 1.97                  | 1.48                   | 33                      | 1                       | 1                    | 2                     | 2                      |
| Subtotal   |                         |                         |                       |  |                      |                       |                        | 403                     | 14                      | 11                   | 29                    | 24                     |
| Existing Land Use <sup>(4)</sup>   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| Count Data   |                         | -                       | -                     | -                                      | -                    | -                     | -                      | 790 <sup>(5)</sup>      | 26                      | 5                    | 28                    | 51                     |
| Total  |                         |                         |                       |  |                      |                       |                        | 1,403                   | 68                      | 20                   | 62                    | 100                    |
| Notes:   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| (1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE) |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| (2) KSF = 1,000 Square Feet  |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| (3) From Rolling Thunder Lots 2-3, LSC, January 2021   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| (4) Based on peak hour counts collected in July 2020 at Firehouse View/Rolling Thunder Way           |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| (5) Estimated based on peak hour traffic counts  |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |
| Source: LSC Transportation Consultants, Inc.   |                         |                         |                       |  |                      |                       |                        |                         |                         |                      |                       |                        |

**Table 7: Rolling Thunder Business Park  
Previously Approved Site Generated Traffic (All Parcels)**

| Analysis Period                             | <u>Weekday</u> |     |       |
|---|----------------|-----|-------|
|   | In             | Out | Total |
| Morning peak hour (vehicle trips/hour)      | 123            | 30  | 153   |
| Evening peak hour (vehicle trips/hour)      | 52             | 116 | 168   |
| Weekday – 24-hour total (vehicle trips/day) | 845            | 845 | 1,690 |



# Figures

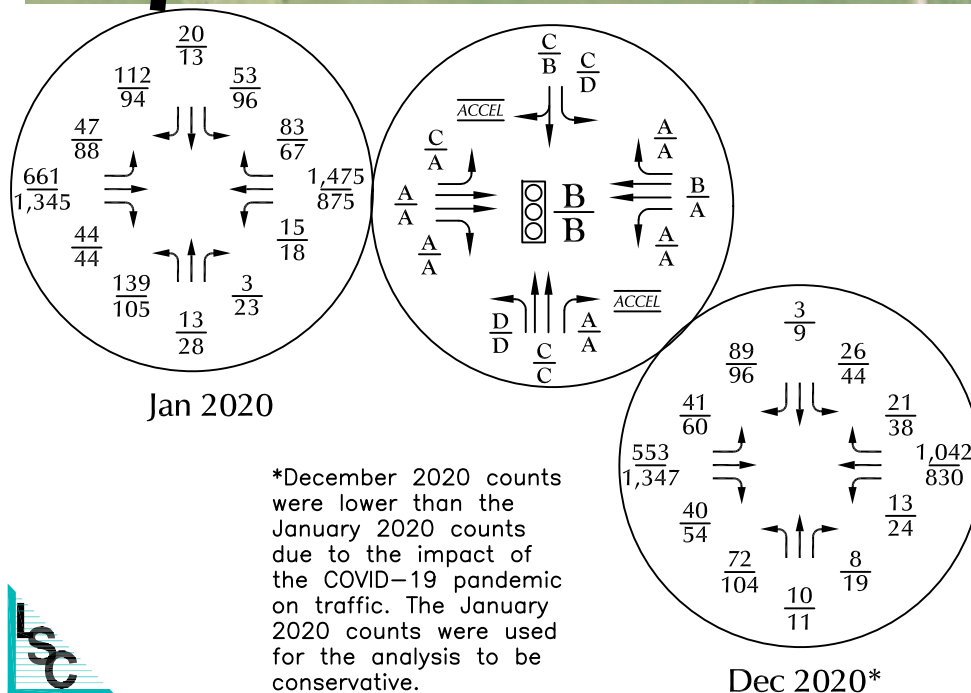
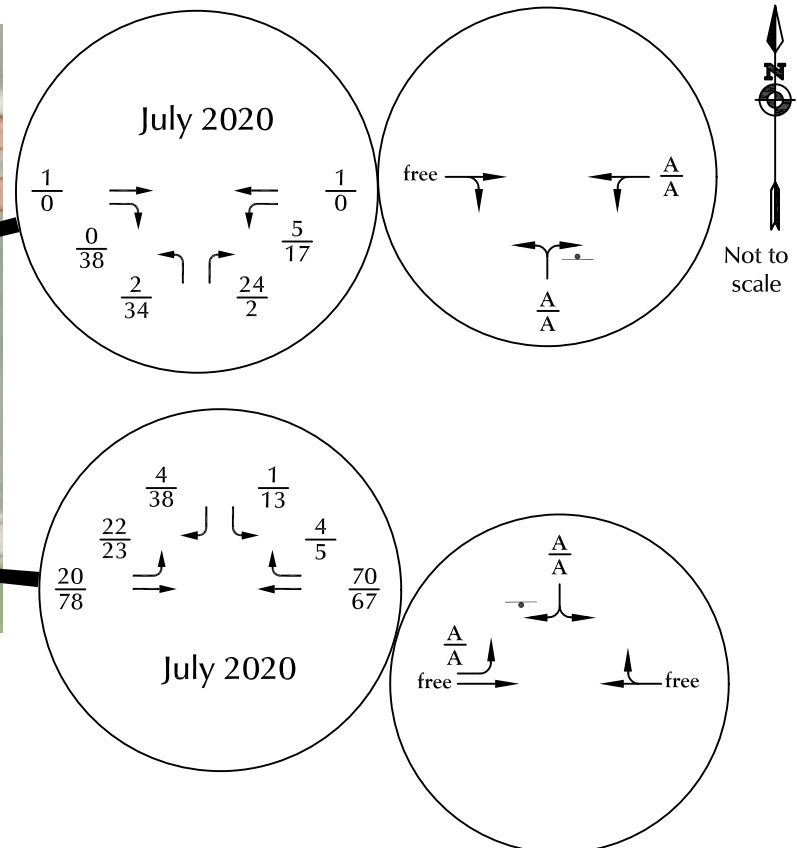
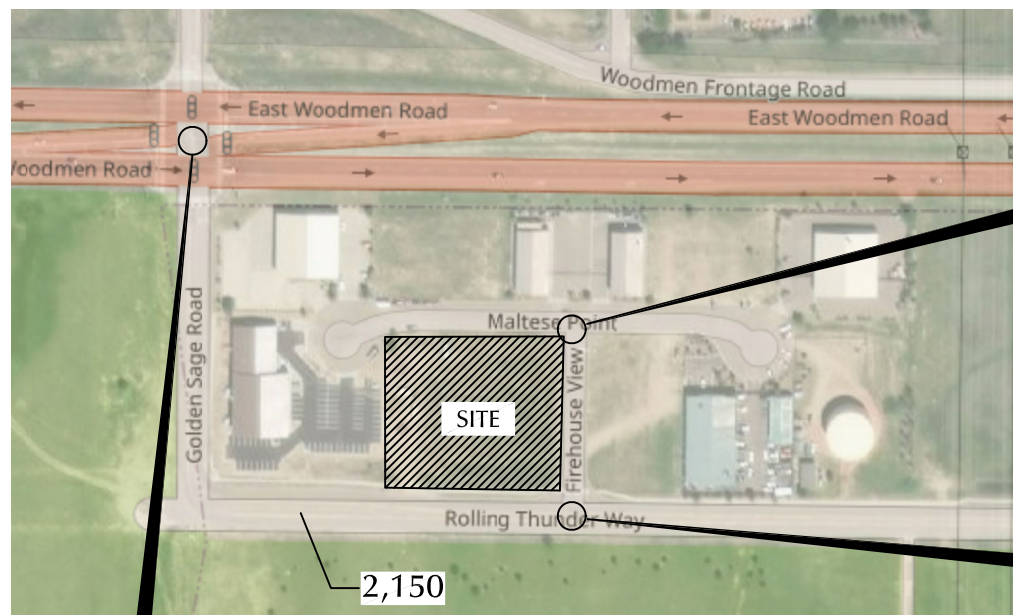
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Figure 1  
Vicinity

Ruckus Development (LSC #S214220)





\*December 2020 counts were lower than the January 2020 counts due to the impact of the COVID-19 pandemic on traffic. The January 2020 counts were used for the analysis to be conservative.

LEGEND:

$\frac{XX}{XX}$  =  $\frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Weekday Daily Traffic (vehicles per day)

$\frac{A}{B}$  =  $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

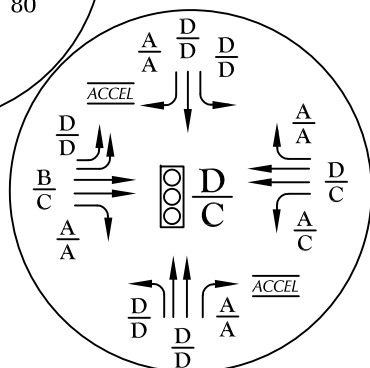
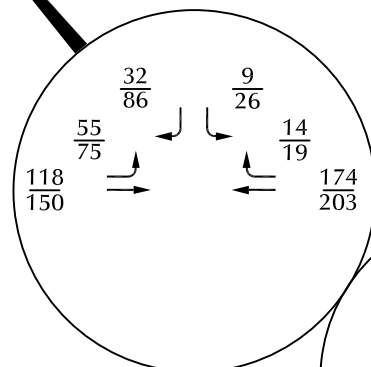
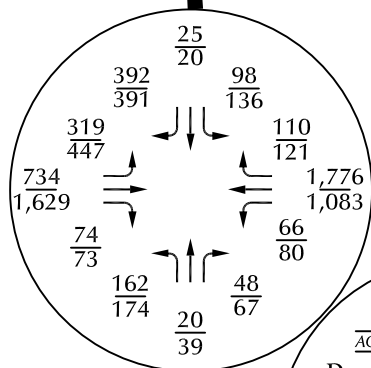
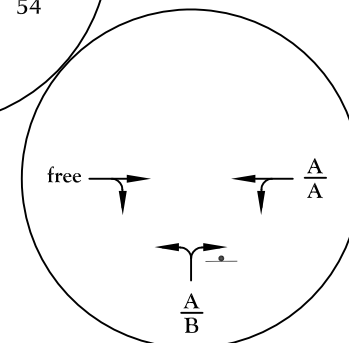
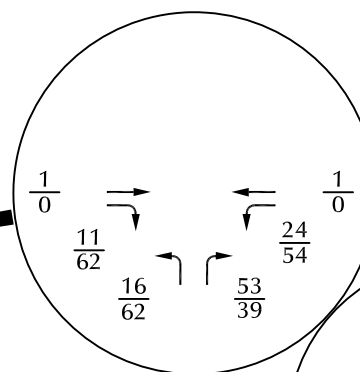
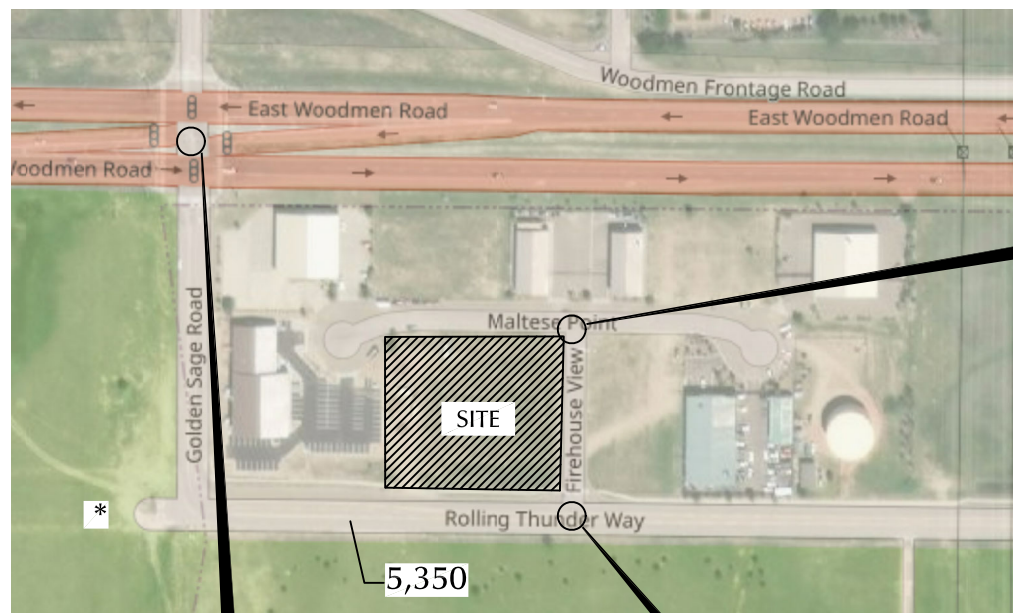
$\frac{C}{D}$  =  $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

⌋ = Stop Sign

Figure 3  
Existing Traffic Conditions

Ruckus Development (LSC #S214220)





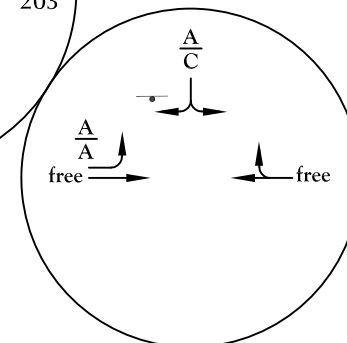
LEGEND:

$$\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$$

XXX = Average Weekday Daily Traffic (vehicles per day)

$$\frac{A}{B} = \frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$$

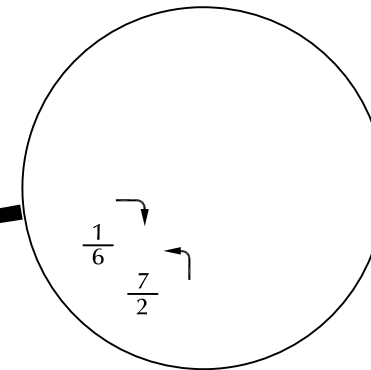
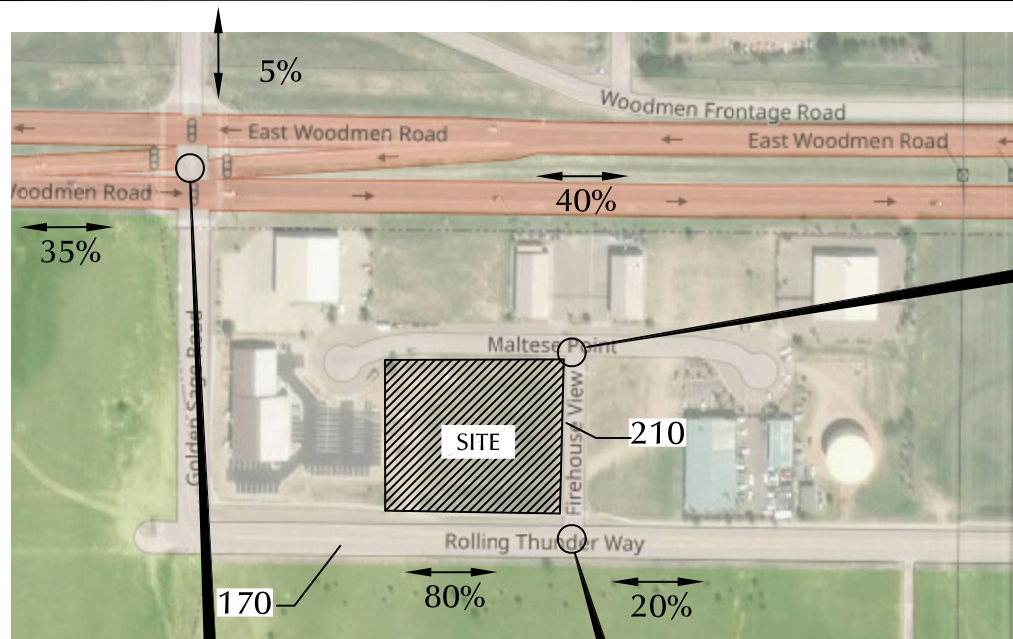
⊥ = Stop Sign



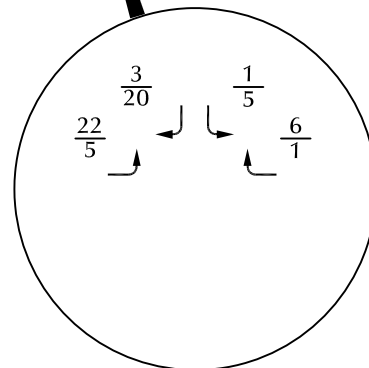
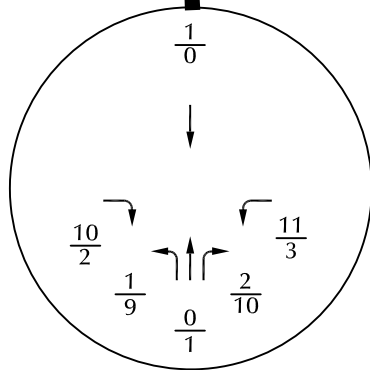
\*Future traffic by 2040 is likely on this leg – however not included in this analysis. The development to the west would likely need to submit a TIS report to address impacts to the study area intersections.

Figure 4  
Long-Term Background Traffic Conditions

Ruckus Development (LSC #S214220)



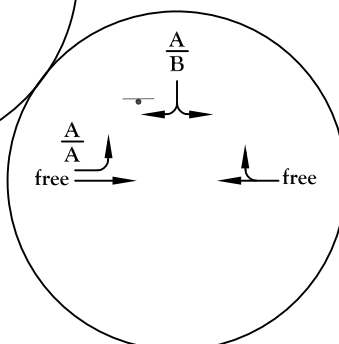
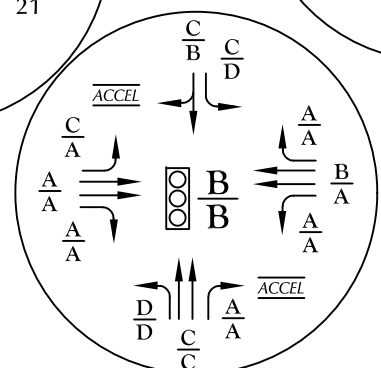
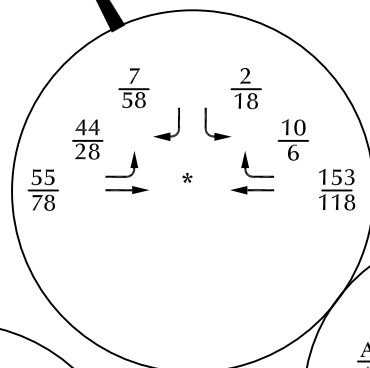
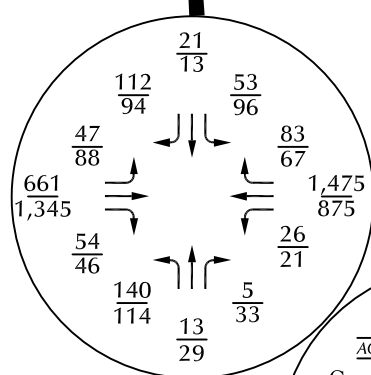
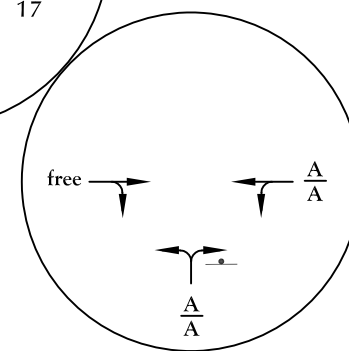
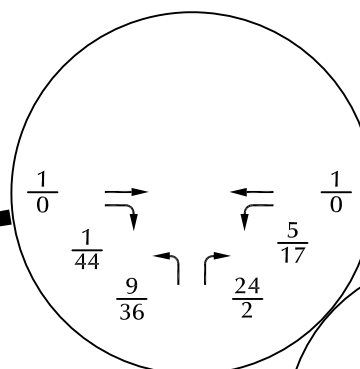
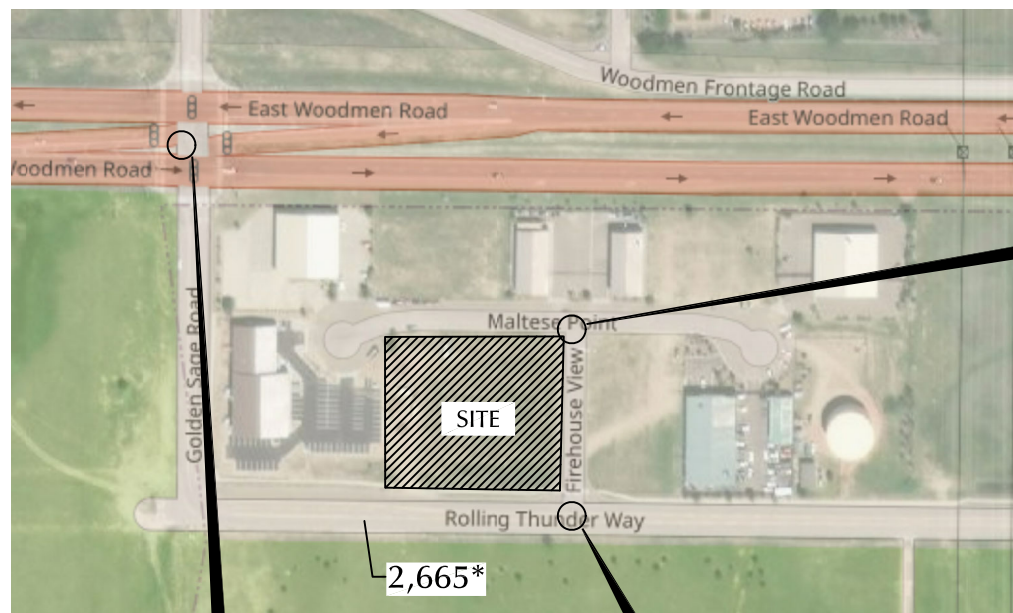
Not to scale



LEGEND:  $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

$\longleftrightarrow 35\%$  = Percent Directional Distribution

XXX = Average Weekday Daily Traffic (vehicles per day)



LEGEND:

$$\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$$

XXX = Average Weekday Daily Traffic (vehicles per day)

$$\frac{A}{B} = \frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$$

⊥ = Stop Sign

\*Through volumes have been adjusted to account for lower traffic volumes during the COVID-19 pandemic.

Figure 6  
Short-Term Total Traffic Conditions

Ruckus Development (LSC #S214220)





# Traffic Counts

---

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 1

## Groups Printed- Bank 1

| Start Time  | Southbound |   |   |   |            | Maltese Pt Westbound |      |   |   |            | Firehouse View Northbound |   |      |   |            | Maltese Pt Eastbound |      |      |   |            | Int. Total |
|-------------|------------|---|---|---|------------|----------------------|------|---|---|------------|---------------------------|---|------|---|------------|----------------------|------|------|---|------------|------------|
|             | L          | T | R | U | App. Total | L                    | T    | R | U | App. Total | L                         | T | R    | U | App. Total | L                    | T    | R    | U | App. Total |            |
| 06:30 AM    | 0          | 0 | 0 | 0 | 0          | 0                    | 0    | 0 | 0 | 0          | 0                         | 0 | 1    | 0 | 1          | 0                    | 0    | 0    | 0 | 0          | 1          |
| 06:45 AM    | 0          | 0 | 0 | 0 | 0          | 0                    | 0    | 0 | 0 | 0          | 0                         | 0 | 1    | 0 | 1          | 0                    | 0    | 0    | 0 | 0          | 1          |
| Total       | 0          | 0 | 0 | 0 | 0          | 0                    | 0    | 0 | 0 | 0          | 0                         | 0 | 2    | 0 | 2          | 0                    | 0    | 0    | 0 | 0          | 2          |
| 07:00 AM    | 0          | 0 | 0 | 0 | 0          | 0                    | 1    | 0 | 0 | 1          | 1                         | 0 | 7    | 0 | 8          | 0                    | 1    | 0    | 0 | 1          | 10         |
| 07:15 AM    | 0          | 0 | 0 | 0 | 0          | 2                    | 0    | 0 | 0 | 2          | 0                         | 0 | 4    | 0 | 4          | 0                    | 0    | 0    | 0 | 0          | 6          |
| 07:30 AM    | 0          | 0 | 0 | 0 | 0          | 2                    | 0    | 0 | 0 | 2          | 1                         | 0 | 7    | 0 | 8          | 0                    | 0    | 0    | 0 | 0          | 10         |
| 07:45 AM    | 0          | 0 | 0 | 0 | 0          | 1                    | 0    | 0 | 0 | 1          | 0                         | 0 | 6    | 0 | 6          | 0                    | 0    | 0    | 0 | 0          | 7          |
| Total       | 0          | 0 | 0 | 0 | 0          | 5                    | 1    | 0 | 0 | 6          | 2                         | 0 | 24   | 0 | 26         | 0                    | 1    | 0    | 0 | 1          | 33         |
| 08:00 AM    | 0          | 0 | 0 | 0 | 0          | 0                    | 1    | 0 | 0 | 1          | 0                         | 0 | 0    | 0 | 0          | 0                    | 0    | 1    | 0 | 1          | 2          |
| 08:15 AM    | 0          | 0 | 0 | 0 | 0          | 2                    | 0    | 0 | 0 | 2          | 3                         | 0 | 2    | 0 | 5          | 0                    | 0    | 1    | 0 | 1          | 8          |
| Grand Total | 0          | 0 | 0 | 0 | 0          | 7                    | 2    | 0 | 0 | 9          | 5                         | 0 | 28   | 0 | 33         | 0                    | 1    | 2    | 0 | 3          | 45         |
| Apprch %    | 0          | 0 | 0 | 0 |            | 77.8                 | 22.2 | 0 | 0 |            | 15.2                      | 0 | 84.8 | 0 |            | 0                    | 33.3 | 66.7 | 0 |            |            |
| Total %     | 0          | 0 | 0 | 0 |            | 15.6                 | 4.4  | 0 | 0 | 20         | 11.1                      | 0 | 62.2 | 0 | 73.3       | 0                    | 2.2  | 4.4  | 0 | 6.7        |            |

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 2

|   | Southbound |      |      |      |            | Maltese Pt<br>Westbound |      |      |      |            | Firehouse View<br>Northbound |      |      |      |            | Maltese Pt<br>Eastbound |      |      |      |            |            |
|---|------------|------|------|------|------------|-------------------------|------|------|------|------------|------------------------------|------|------|------|------------|-------------------------|------|------|------|------------|------------|
| Start Time  | L          | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b> |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 7:00:00 AM                |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| 7:00:00 AM  | 0          | 0    | 0    | 0    | 0          | 0                       | 1    | 0    | 0    | 1          | 1                            | 0    | 7    | 0    | 8          | 0                       | 1    | 0    | 0    | 1          | 10         |
| 7:15:00 AM  | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 0                            | 0    | 4    | 0    | 4          | 0                       | 0    | 0    | 0    | 0          | 6          |
| 7:30:00 AM  | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 1                            | 0    | 7    | 0    | 8          | 0                       | 0    | 0    | 0    | 0          | 10         |
| 7:45:00 AM  | 0          | 0    | 0    | 0    | 0          | 1                       | 0    | 0    | 0    | 1          | 0                            | 0    | 6    | 0    | 6          | 0                       | 0    | 0    | 0    | 0          | 7          |
| Total Volume  | 0          | 0    | 0    | 0    | 0          | 5                       | 1    | 0    | 0    | 6          | 2                            | 0    | 24   | 0    | 26         | 0                       | 1    | 0    | 0    | 1          | 33         |
| % App. Total  | 0          | 0    | 0    | 0    |            | 83.3                    | 16.7 | 0    | 0    |            | 7.7                          | 0    | 92.3 | 0    |            | 0                       | 100  | 0    | 0    |            |            |
| PHF   | .000       | .000 | .000 | .000 | .000       | .625                    | .250 | .000 | .000 | .750       | .500                         | .000 | .857 | .000 | .813       | .000                    | .250 | .000 | .000 | .250       | .825       |

# LSC Transportation Consultants, Inc.

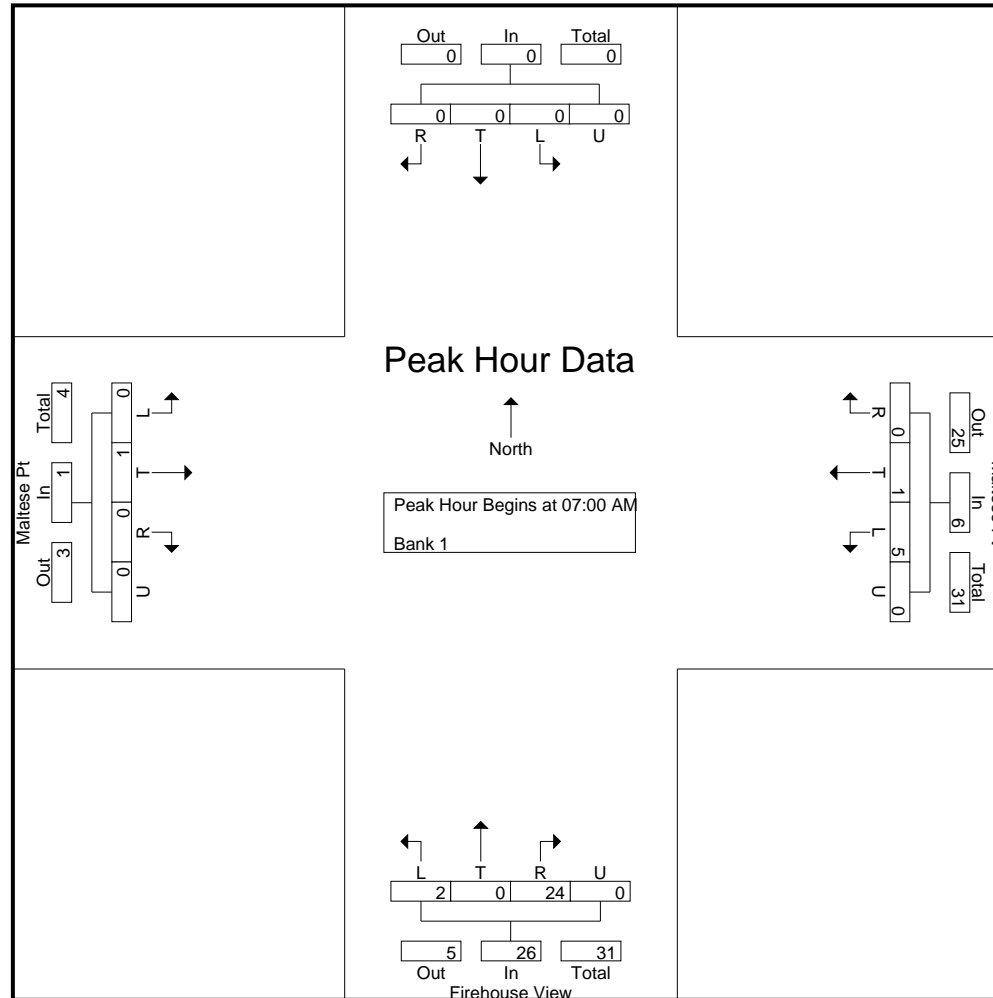
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt AM

Site Code : 00204440

Start Date : 7/1/2020

Page No : 3



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 4

|   | Southbound |      |      |      |            | Maltese Pt<br>Westbound |      |      |      |            | Firehouse View<br>Northbound |      |      |      |            | Maltese Pt<br>Eastbound |      |      |      |            |            |
|---|------------|------|------|------|------------|-------------------------|------|------|------|------------|------------------------------|------|------|------|------------|-------------------------|------|------|------|------------|------------|
| Start Time  | L          | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b> |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| Peak Hour for Each Approach Begins at:                                |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
|   | 6:30:00 AM |      |      |      |            | 7:00:00 AM              |      |      |      |            | 7:00:00 AM                   |      |      |      |            | 7:30:00 AM              |      |      |      |            |            |
| +0 mins.  | 0          | 0    | 0    | 0    | 0          | 0                       | 1    | 0    | 0    | 1          | 1                            | 0    | 7    | 0    | 8          | 0                       | 0    | 0    | 0    | 0          | 0          |
| +5 mins.  | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 0                            | 0    | 4    | 0    | 4          | 0                       | 0    | 0    | 0    | 0          | 0          |
| +10 mins.   | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 1                            | 0    | 7    | 0    | 8          | 0                       | 0    | 1    | 0    | 1          | 1          |
| +15 mins.   | 0          | 0    | 0    | 0    | 0          | 1                       | 0    | 0    | 0    | 1          | 0                            | 0    | 6    | 0    | 6          | 0                       | 0    | 1    | 0    | 1          | 1          |
| Total Volume  | 0          | 0    | 0    | 0    | 0          | 5                       | 1    | 0    | 0    | 6          | 2                            | 0    | 24   | 0    | 26         | 0                       | 0    | 2    | 0    | 2          | 2          |
| % App. Total  | 0          | 0    | 0    | 0    |            | 83.3                    | 16.7 | 0    | 0    |            | 7.7                          | 0    | 92.3 | 0    |            | 0                       | 0    | 100  | 0    |            |            |
| PHF   | .000       | .000 | .000 | .000 | .000       | .625                    | .250 | .000 | .000 | .750       | .500                         | .000 | .857 | .000 | .813       | .000                    | .000 | .500 | .000 | .500       |            |

# LSC Transportation Consultants, Inc.

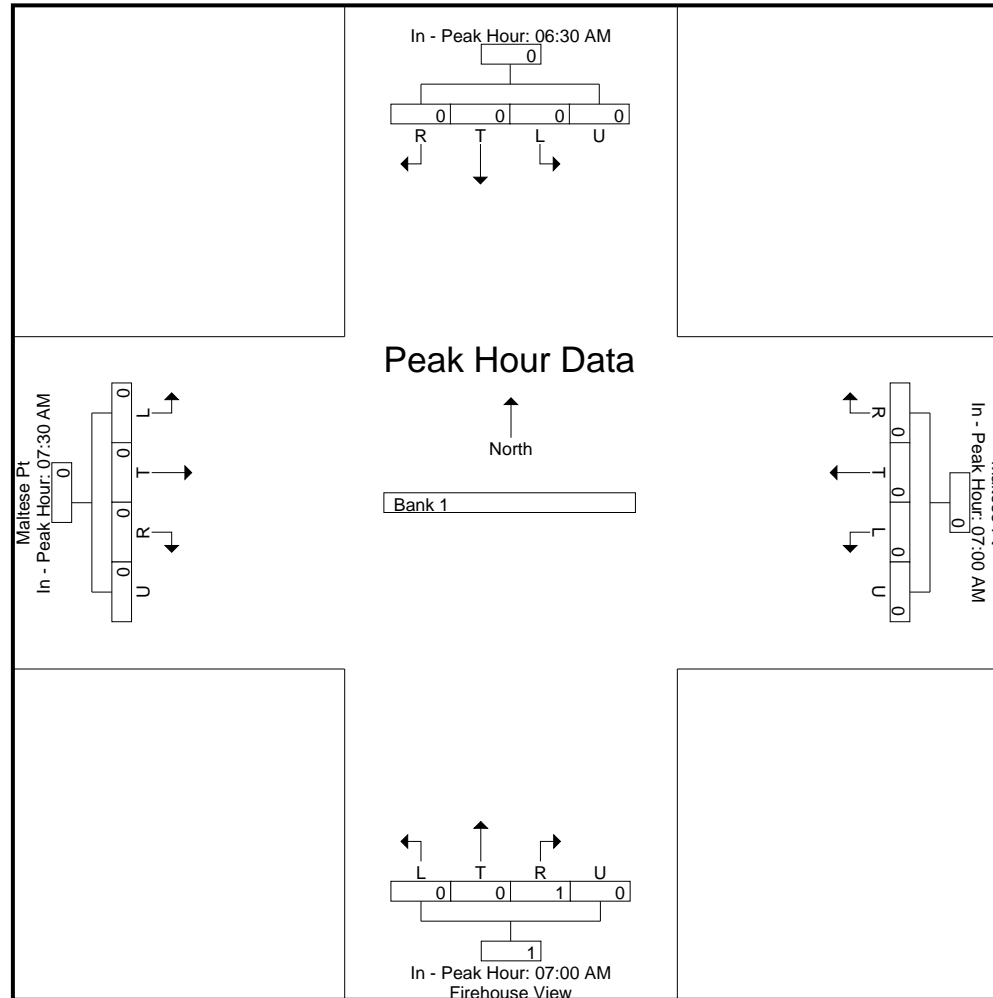
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt AM

Site Code : 00204440

Start Date : 7/1/2020

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# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 1

## Groups Printed- Bank 1

| Start Time  | Southbound |   |   |   |            | Maltese Pt Westbound |   |   |   |            | Firehouse View Northbound |   |      |   |            | Maltese Pt Eastbound |   |      |   |            | Int. Total |
|-------------|------------|---|---|---|------------|----------------------|---|---|---|------------|---------------------------|---|------|---|------------|----------------------|---|------|---|------------|------------|
|             | L          | T | R | U | App. Total | L                    | T | R | U | App. Total | L                         | T | R    | U | App. Total | L                    | T | R    | U | App. Total |            |
| 04:00 PM    | 0          | 0 | 0 | 0 | 0          | 4                    | 0 | 0 | 0 | 4          | 6                         | 0 | 3    | 0 | 9          | 0                    | 0 | 8    | 0 | 8          | 21         |
| 04:15 PM    | 0          | 0 | 0 | 0 | 0          | 3                    | 0 | 0 | 0 | 3          | 2                         | 0 | 2    | 0 | 4          | 0                    | 0 | 1    | 0 | 1          | 8          |
| 04:30 PM    | 0          | 0 | 0 | 0 | 0          | 4                    | 0 | 0 | 0 | 4          | 4                         | 0 | 0    | 0 | 4          | 0                    | 0 | 2    | 0 | 2          | 10         |
| 04:45 PM    | 0          | 0 | 0 | 0 | 0          | 2                    | 0 | 0 | 0 | 2          | 9                         | 0 | 1    | 0 | 10         | 0                    | 0 | 3    | 0 | 3          | 15         |
| Total       | 0          | 0 | 0 | 0 | 0          | 13                   | 0 | 0 | 0 | 13         | 21                        | 0 | 6    | 0 | 27         | 0                    | 0 | 14   | 0 | 14         | 54         |
| 05:00 PM    | 0          | 0 | 0 | 0 | 0          | 5                    | 0 | 0 | 0 | 5          | 18                        | 0 | 0    | 0 | 18         | 0                    | 0 | 25   | 0 | 25         | 48         |
| 05:15 PM    | 0          | 0 | 0 | 0 | 0          | 1                    | 0 | 0 | 0 | 1          | 4                         | 0 | 1    | 0 | 5          | 0                    | 0 | 9    | 0 | 9          | 15         |
| 05:30 PM    | 0          | 0 | 0 | 0 | 0          | 9                    | 0 | 0 | 0 | 9          | 3                         | 0 | 0    | 0 | 3          | 0                    | 0 | 1    | 0 | 1          | 13         |
| 05:45 PM    | 0          | 0 | 0 | 0 | 0          | 2                    | 0 | 0 | 0 | 2          | 3                         | 0 | 0    | 0 | 3          | 0                    | 0 | 0    | 0 | 0          | 5          |
| Total       | 0          | 0 | 0 | 0 | 0          | 17                   | 0 | 0 | 0 | 17         | 28                        | 0 | 1    | 0 | 29         | 0                    | 0 | 35   | 0 | 35         | 81         |
| Grand Total | 0          | 0 | 0 | 0 | 0          | 30                   | 0 | 0 | 0 | 30         | 49                        | 0 | 7    | 0 | 56         | 0                    | 0 | 49   | 0 | 49         | 135        |
| Apprch %    | 0          | 0 | 0 | 0 |            | 100                  | 0 | 0 | 0 |            | 87.5                      | 0 | 12.5 | 0 |            | 0                    | 0 | 100  | 0 |            |            |
| Total %     | 0          | 0 | 0 | 0 | 0          | 22.2                 | 0 | 0 | 0 | 22.2       | 36.3                      | 0 | 5.2  | 0 | 41.5       | 0                    | 0 | 36.3 | 0 | 36.3       |            |

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 2

|   | Southbound |      |      |      |            | Maltese Pt<br>Westbound |      |      |      |            | Firehouse View<br>Northbound |      |      |      |            | Maltese Pt<br>Eastbound |      |      |      |            |            |
|---|------------|------|------|------|------------|-------------------------|------|------|------|------------|------------------------------|------|------|------|------------|-------------------------|------|------|------|------------|------------|
| Start Time  | L          | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b> |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 4:45:00 PM                |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| 4:45:00 PM  | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 9                            | 0    | 1    | 0    | 10         | 0                       | 0    | 3    | 0    | 3          | 15         |
| 5:00:00 PM  | 0          | 0    | 0    | 0    | 0          | 5                       | 0    | 0    | 0    | 5          | 18                           | 0    | 0    | 0    | 18         | 0                       | 0    | 25   | 0    | 25         | 48         |
| 5:15:00 PM  | 0          | 0    | 0    | 0    | 0          | 1                       | 0    | 0    | 0    | 1          | 4                            | 0    | 1    | 0    | 5          | 0                       | 0    | 9    | 0    | 9          | 15         |
| 5:30:00 PM  | 0          | 0    | 0    | 0    | 0          | 9                       | 0    | 0    | 0    | 9          | 3                            | 0    | 0    | 0    | 3          | 0                       | 0    | 1    | 0    | 1          | 13         |
| Total Volume  | 0          | 0    | 0    | 0    | 0          | 17                      | 0    | 0    | 0    | 17         | 34                           | 0    | 2    | 0    | 36         | 0                       | 0    | 38   | 0    | 38         | 91         |
| % App. Total  | 0          | 0    | 0    | 0    | 0          | 100                     | 0    | 0    | 0    | 0          | 94.4                         | 0    | 5.6  | 0    | 0          | 0                       | 0    | 100  | 0    | 0          | 0          |
| PHF   | .000       | .000 | .000 | .000 | .000       | .472                    | .000 | .000 | .000 | .472       | .472                         | .000 | .500 | .000 | .500       | .000                    | .000 | .380 | .000 | .380       | .474       |



# LSC Transportation Consultants, Inc.

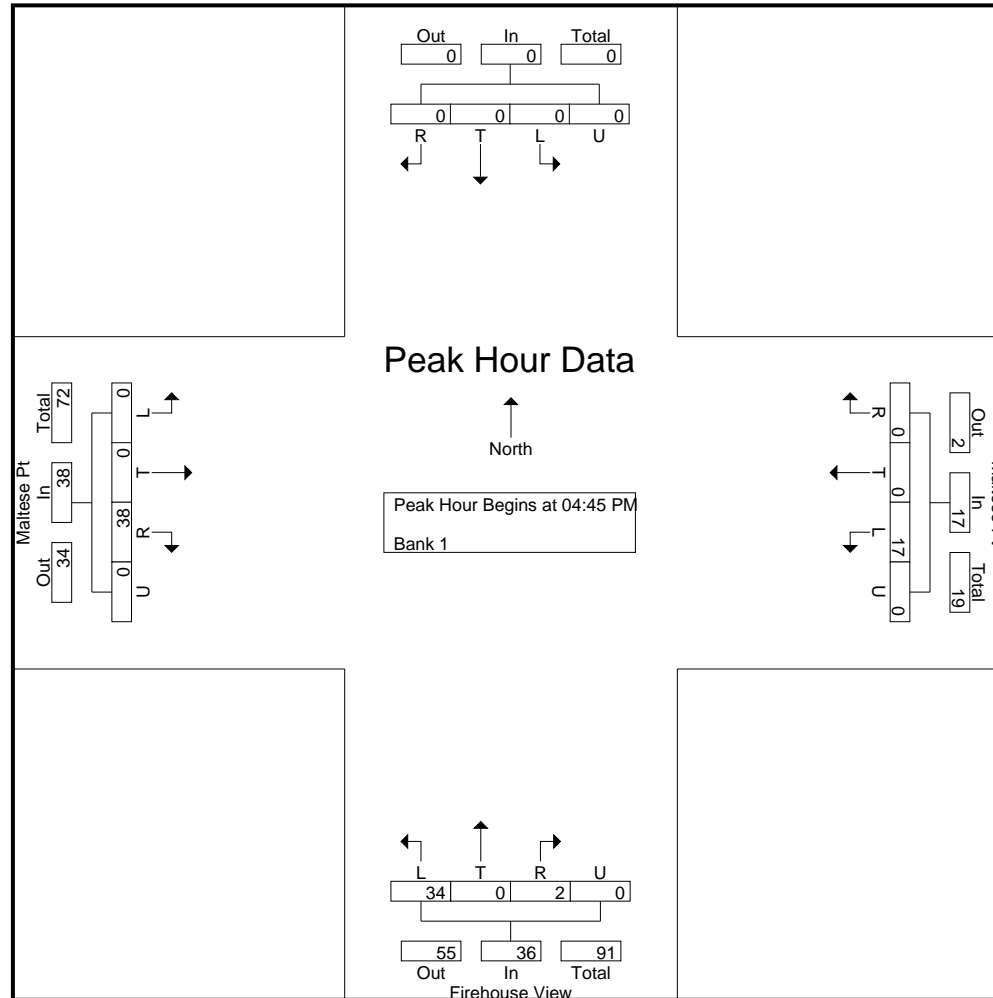
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt PM

Site Code : 00204440

Start Date : 7/1/2020

Page No : 3



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 4

|   | Southbound |      |      |      |            | Maltese Pt<br>Westbound |      |      |      |            | Firehouse View<br>Northbound |      |      |      |            | Maltese Pt<br>Eastbound |      |      |      |            |            |
|---|------------|------|------|------|------------|-------------------------|------|------|------|------------|------------------------------|------|------|------|------------|-------------------------|------|------|------|------------|------------|
| Start Time  | L          | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L                       | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b> |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
| Peak Hour for Each Approach Begins at:                                |            |      |      |      |            |                         |      |      |      |            |                              |      |      |      |            |                         |      |      |      |            |            |
|   | 4:00:00 PM |      |      |      |            | 4:45:00 PM              |      |      |      |            | 4:30:00 PM                   |      |      |      |            | 4:30:00 PM              |      |      |      |            |            |
| +0 mins.  | 0          | 0    | 0    | 0    | 0          | 2                       | 0    | 0    | 0    | 2          | 4                            | 0    | 0    | 0    | 4          | 0                       | 0    | 2    | 0    | 2          |            |
| +5 mins.  | 0          | 0    | 0    | 0    | 0          | 5                       | 0    | 0    | 0    | 5          | 9                            | 0    | 1    | 0    | 10         | 0                       | 0    | 3    | 0    | 3          |            |
| +10 mins.   | 0          | 0    | 0    | 0    | 0          | 1                       | 0    | 0    | 0    | 1          | 18                           | 0    | 0    | 0    | 18         | 0                       | 0    | 25   | 0    | 25         |            |
| +15 mins.   | 0          | 0    | 0    | 0    | 0          | 9                       | 0    | 0    | 0    | 9          | 4                            | 0    | 1    | 0    | 5          | 0                       | 0    | 9    | 0    | 9          |            |
| Total Volume  | 0          | 0    | 0    | 0    | 0          | 17                      | 0    | 0    | 0    | 17         | 35                           | 0    | 2    | 0    | 37         | 0                       | 0    | 39   | 0    | 39         |            |
| % App. Total  | 0          | 0    | 0    | 0    |            | 100                     | 0    | 0    | 0    |            | 94.6                         | 0    | 5.4  | 0    |            | 0                       | 0    | 100  | 0    |            |            |
| PHF   | .000       | .000 | .000 | .000 | .000       | .472                    | .000 | .000 | .000 | .472       | .486                         | .000 | .500 | .000 | .514       | .000                    | .000 | .390 | .000 | .390       |            |

# LSC Transportation Consultants, Inc.

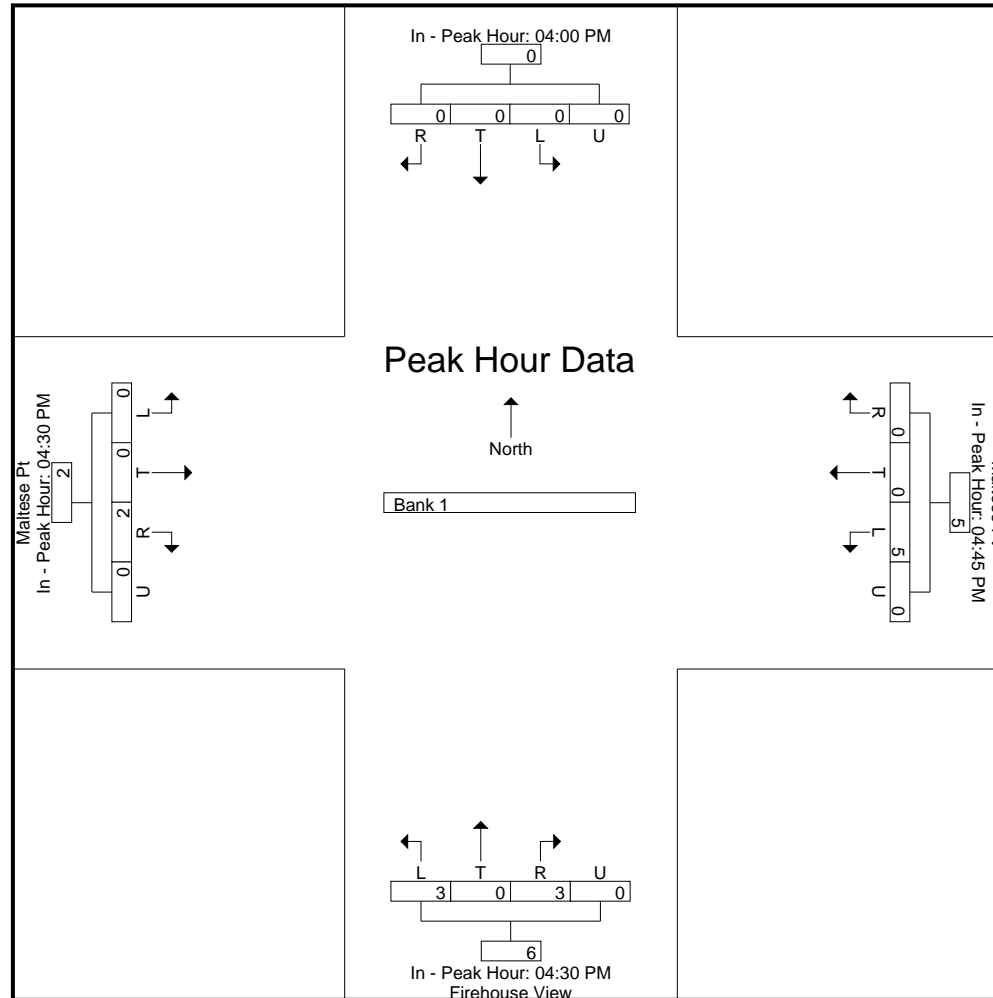
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Maltese Pt PM

Site Code : 00204440

Start Date : 7/1/2020

Page No : 5



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 1

## Groups Printed- Unshifted

| Start Time  | Firehouse View Southbound |   |      |   |            | Rolling Thunder Wy Westbound |      |     |   |            | Northbound |   |   |   |            | Rolling Thunder Wy Eastbound |      |   |     |            | Int. Total |
|-------------|---------------------------|---|------|---|------------|------------------------------|------|-----|---|------------|------------|---|---|---|------------|------------------------------|------|---|-----|------------|------------|
|             | L                         | T | R    | U | App. Total | L                            | T    | R   | U | App. Total | L          | T | R | U | App. Total | L                            | T    | R | U   | App. Total |            |
| 06:30 AM    | 0                         | 0 | 0    | 0 | 0          | 0                            | 19   | 0   | 0 | 19         | 0          | 0 | 0 | 0 | 0          | 1                            | 4    | 0 | 0   | 5          | 24         |
| 06:45 AM    | 0                         | 0 | 0    | 0 | 0          | 0                            | 12   | 1   | 0 | 13         | 0          | 0 | 0 | 0 | 0          | 0                            | 1    | 0 | 0   | 1          | 14         |
| Total       | 0                         | 0 | 0    | 0 | 0          | 0                            | 31   | 1   | 0 | 32         | 0          | 0 | 0 | 0 | 0          | 1                            | 5    | 0 | 0   | 6          | 38         |
| 07:00 AM    | 0                         | 0 | 0    | 0 | 0          | 0                            | 21   | 3   | 0 | 24         | 0          | 0 | 0 | 0 | 0          | 5                            | 3    | 0 | 0   | 8          | 32         |
| 07:15 AM    | 1                         | 0 | 1    | 0 | 2          | 0                            | 18   | 0   | 0 | 18         | 0          | 0 | 0 | 0 | 0          | 4                            | 8    | 0 | 0   | 12         | 32         |
| 07:30 AM    | 0                         | 0 | 2    | 0 | 2          | 0                            | 19   | 0   | 0 | 19         | 0          | 0 | 0 | 0 | 0          | 8                            | 3    | 0 | 1   | 12         | 33         |
| 07:45 AM    | 0                         | 0 | 1    | 0 | 1          | 0                            | 12   | 1   | 0 | 13         | 0          | 0 | 0 | 0 | 0          | 5                            | 6    | 0 | 0   | 11         | 25         |
| Total       | 1                         | 0 | 4    | 0 | 5          | 0                            | 70   | 4   | 0 | 74         | 0          | 0 | 0 | 0 | 0          | 22                           | 20   | 0 | 1   | 43         | 122        |
| 08:00 AM    | 1                         | 0 | 0    | 0 | 1          | 0                            | 5    | 0   | 0 | 5          | 0          | 0 | 0 | 0 | 0          | 0                            | 1    | 0 | 0   | 1          | 7          |
| 08:15 AM    | 0                         | 0 | 3    | 0 | 3          | 0                            | 18   | 1   | 0 | 19         | 0          | 0 | 0 | 0 | 0          | 4                            | 10   | 0 | 0   | 14         | 36         |
| Grand Total | 2                         | 0 | 7    | 0 | 9          | 0                            | 124  | 6   | 0 | 130        | 0          | 0 | 0 | 0 | 0          | 27                           | 36   | 0 | 1   | 64         | 203        |
| Apprch %    | 22.2                      | 0 | 77.8 | 0 |            | 0                            | 95.4 | 4.6 | 0 |            | 0          | 0 | 0 | 0 |            | 42.2                         | 56.2 | 0 | 1.6 |            |            |
| Total %     | 1                         | 0 | 3.4  | 0 | 4.4        | 0                            | 61.1 | 3   | 0 | 64         | 0          | 0 | 0 | 0 | 0          | 13.3                         | 17.7 | 0 | 0.5 | 31.5       |            |

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 2

|   | Firehouse View<br>Southbound |      |      |      |            | Rolling Thunder Wy<br>Westbound |      |      |      |            | Northbound |      |      |      |            | Rolling Thunder Wy<br>Eastbound |      |      |      |            |            |
|---|------------------------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|
| Start Time  | L                            | T    | R    | U    | App. Total | L                               | T    | R    | U    | App. Total | L          | T    | R    | U    | App. Total | L                               | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b> |                              |      |      |      |            |                                 |      |      |      |            |            |      |      |      |            |                                 |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 7:00:00 AM                |                              |      |      |      |            |                                 |      |      |      |            |            |      |      |      |            |                                 |      |      |      |            |            |
| 7:00:00 AM  | 0                            | 0    | 0    | 0    | 0          | 0                               | 21   | 3    | 0    | 24         | 0          | 0    | 0    | 0    | 0          | 5                               | 3    | 0    | 0    | 8          | 32         |
| 7:15:00 AM  | 1                            | 0    | 1    | 0    | 2          | 0                               | 18   | 0    | 0    | 18         | 0          | 0    | 0    | 0    | 0          | 4                               | 8    | 0    | 0    | 12         | 32         |
| 7:30:00 AM  | 0                            | 0    | 2    | 0    | 2          | 0                               | 19   | 0    | 0    | 19         | 0          | 0    | 0    | 0    | 0          | 8                               | 3    | 0    | 1    | 12         | 33         |
| 7:45:00 AM  | 0                            | 0    | 1    | 0    | 1          | 0                               | 12   | 1    | 0    | 13         | 0          | 0    | 0    | 0    | 0          | 5                               | 6    | 0    | 0    | 11         | 25         |
| Total Volume  | 1                            | 0    | 4    | 0    | 5          | 0                               | 70   | 4    | 0    | 74         | 0          | 0    | 0    | 0    | 0          | 22                              | 20   | 0    | 1    | 43         | 122        |
| % App. Total  | 20                           | 0    | 80   | 0    |            | 0                               | 94.6 | 5.4  | 0    |            | 0          | 0    | 0    | 0    |            | 51.2                            | 46.5 | 0    | 2.3  |            |            |
| PHF   | .250                         | .000 | .500 | .000 | .625       | .000                            | .833 | .333 | .000 | .771       | .000       | .000 | .000 | .000 | .000       | .688                            | .625 | .000 | .250 | .896       | .924       |

# LSC Transportation Consultants, Inc.

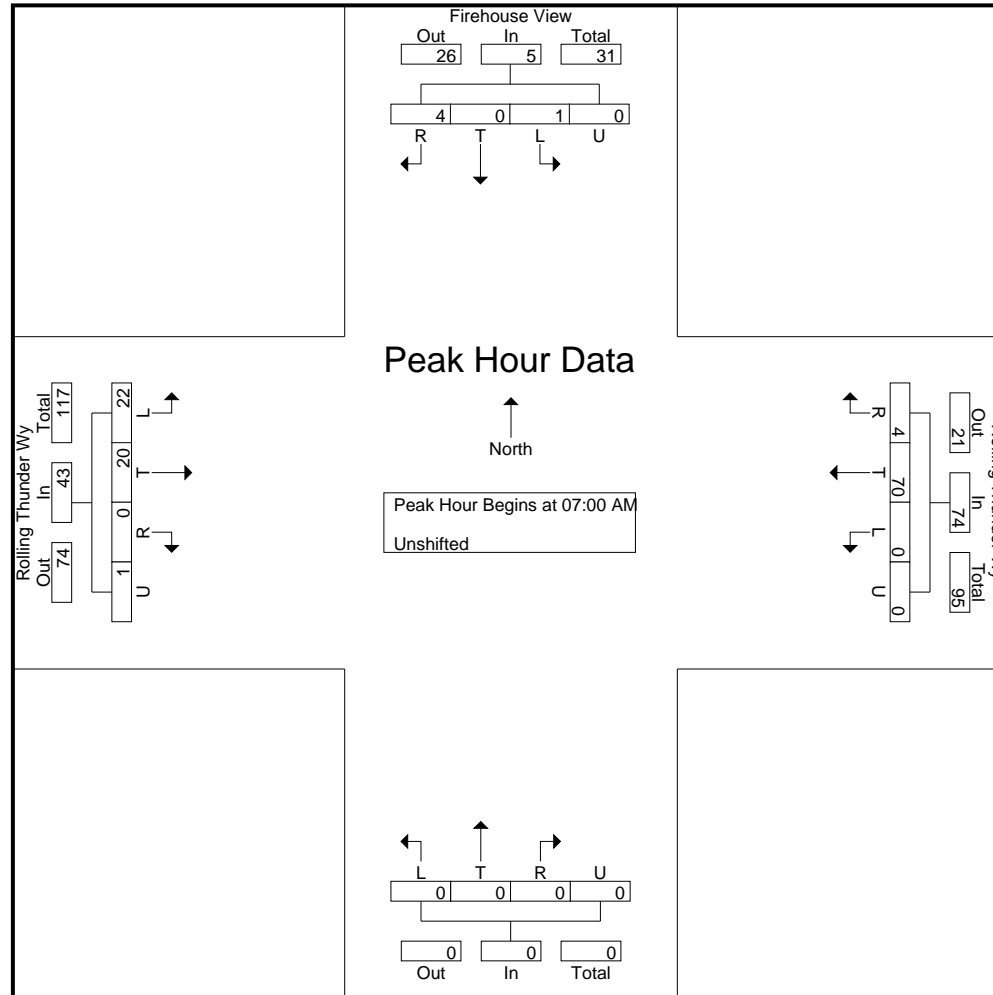
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy AM

Site Code : 00204440

Start Date : 7/1/2020

Page No : 3



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy AM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 4

|   | Firehouse View Southbound |      |      |      |            | Rolling Thunder Wy Westbound |      |      |      |            | Northbound |      |      |      |            | Rolling Thunder Wy Eastbound |      |      |      |            |            |
|---|---------------------------|------|------|------|------------|------------------------------|------|------|------|------------|------------|------|------|------|------------|------------------------------|------|------|------|------------|------------|
| Start Time  | L                         | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L          | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b> |                           |      |      |      |            |                              |      |      |      |            |            |      |      |      |            |                              |      |      |      |            |            |
| Peak Hour for Each Approach Begins at:                                |                           |      |      |      |            |                              |      |      |      |            |            |      |      |      |            |                              |      |      |      |            |            |
|   | 7:30:00 AM                |      |      |      |            | 6:30:00 AM                   |      |      |      |            | 6:30:00 AM |      |      |      |            | 7:00:00 AM                   |      |      |      |            |            |
| +0 mins.  | 0                         | 0    | 2    | 0    | 2          | 0                            | 19   | 0    | 0    | 19         | 0          | 0    | 0    | 0    | 0          | 5                            | 3    | 0    | 0    | 8          |            |
| +5 mins.  | 0                         | 0    | 1    | 0    | 1          | 0                            | 12   | 1    | 0    | 13         | 0          | 0    | 0    | 0    | 0          | 4                            | 8    | 0    | 0    | 12         |            |
| +10 mins.   | 1                         | 0    | 0    | 0    | 1          | 0                            | 21   | 3    | 0    | 24         | 0          | 0    | 0    | 0    | 0          | 8                            | 3    | 0    | 1    | 12         |            |
| +15 mins.   | 0                         | 0    | 3    | 0    | 3          | 0                            | 18   | 0    | 0    | 18         | 0          | 0    | 0    | 0    | 0          | 5                            | 6    | 0    | 0    | 11         |            |
| Total Volume  | 1                         | 0    | 6    | 0    | 7          | 0                            | 70   | 4    | 0    | 74         | 0          | 0    | 0    | 0    | 0          | 22                           | 20   | 0    | 1    | 43         |            |
| % App. Total  | 14.3                      | 0    | 85.7 | 0    |            | 0                            | 94.6 | 5.4  | 0    |            | 0          | 0    | 0    | 0    |            | 51.2                         | 46.5 | 0    | 2.3  |            |            |
| PHF   | .250                      | .000 | .500 | .000 | .583       | .000                         | .833 | .333 | .000 | .771       | .000       | .000 | .000 | .000 | .000       | .688                         | .625 | .000 | .250 | .896       |            |

# LSC Transportation Consultants, Inc.

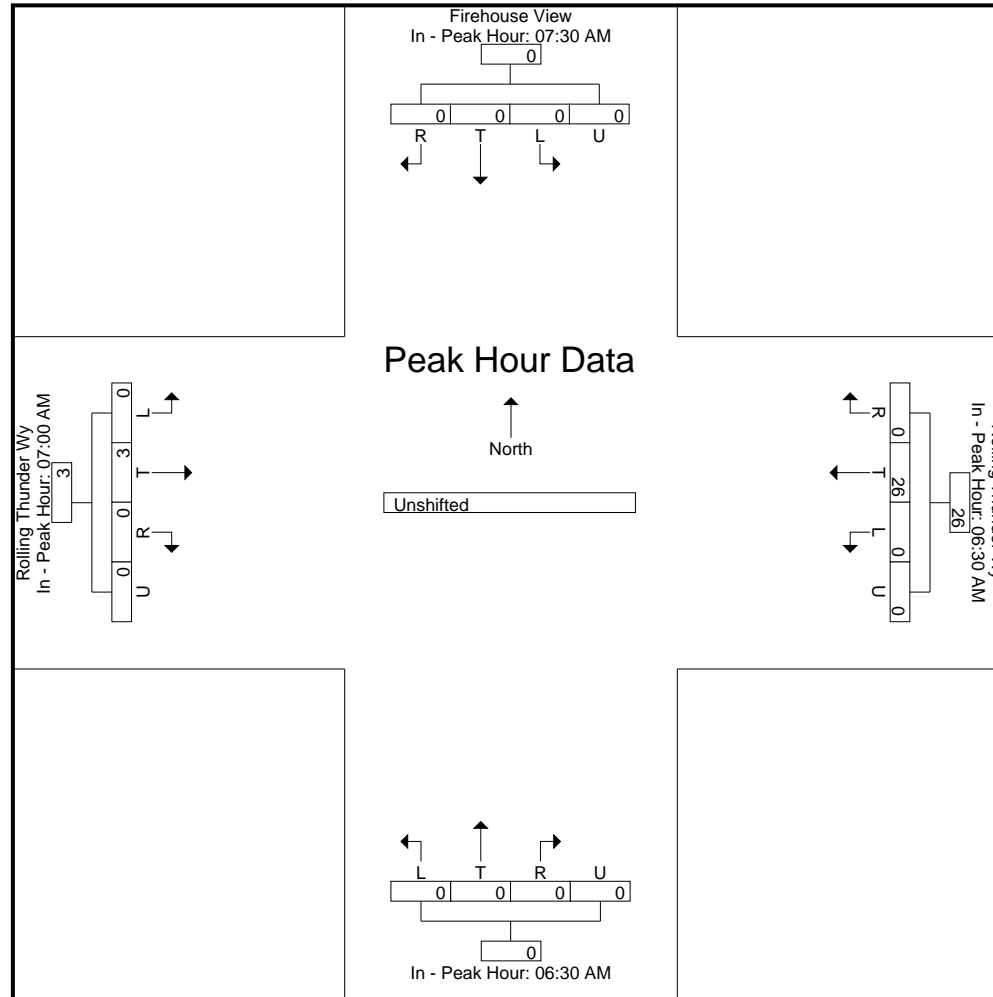
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy AM

Site Code : 00204440

Start Date : 7/1/2020

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# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 1

## Groups Printed- Unshifted

| Start Time  | Firehouse View Southbound |   |      |   |            | Rolling Thunder Wy Westbound |      |     |   |            | Northbound |   |   |   |            | Rolling Thunder Wy Eastbound |      |     |   |            | Int. Total |
|-------------|---------------------------|---|------|---|------------|------------------------------|------|-----|---|------------|------------|---|---|---|------------|------------------------------|------|-----|---|------------|------------|
|             | L                         | T | R    | U | App. Total | L                            | T    | R   | U | App. Total | L          | T | R | U | App. Total | L                            | T    | R   | U | App. Total |            |
| 04:00 PM    | 4                         | 0 | 10   | 0 | 14         | 0                            | 19   | 4   | 0 | 23         | 0          | 0 | 0 | 0 | 0          | 3                            | 12   | 1   | 0 | 16         | 53         |
| 04:15 PM    | 0                         | 0 | 4    | 0 | 4          | 0                            | 9    | 3   | 0 | 12         | 0          | 0 | 0 | 0 | 0          | 2                            | 16   | 0   | 0 | 18         | 34         |
| 04:30 PM    | 1                         | 0 | 4    | 0 | 5          | 0                            | 13   | 1   | 0 | 14         | 0          | 0 | 0 | 0 | 0          | 3                            | 15   | 0   | 0 | 18         | 37         |
| 04:45 PM    | 1                         | 0 | 5    | 0 | 6          | 0                            | 9    | 3   | 0 | 12         | 0          | 0 | 0 | 0 | 0          | 8                            | 12   | 0   | 0 | 20         | 38         |
| Total       | 6                         | 0 | 23   | 0 | 29         | 0                            | 50   | 11  | 0 | 61         | 0          | 0 | 0 | 0 | 0          | 16                           | 55   | 1   | 0 | 72         | 162        |
| 05:00 PM    | 7                         | 0 | 23   | 0 | 30         | 0                            | 15   | 5   | 0 | 20         | 0          | 0 | 0 | 0 | 0          | 12                           | 27   | 0   | 0 | 39         | 89         |
| 05:15 PM    | 4                         | 0 | 6    | 0 | 10         | 0                            | 14   | 0   | 0 | 14         | 0          | 0 | 0 | 0 | 0          | 6                            | 17   | 0   | 0 | 23         | 47         |
| 05:30 PM    | 0                         | 0 | 8    | 0 | 8          | 0                            | 24   | 0   | 0 | 24         | 0          | 0 | 0 | 0 | 0          | 2                            | 15   | 0   | 0 | 17         | 49         |
| 05:45 PM    | 2                         | 0 | 1    | 0 | 3          | 0                            | 14   | 0   | 0 | 14         | 0          | 0 | 0 | 0 | 0          | 3                            | 19   | 0   | 0 | 22         | 39         |
| Total       | 13                        | 0 | 38   | 0 | 51         | 0                            | 67   | 5   | 0 | 72         | 0          | 0 | 0 | 0 | 0          | 23                           | 78   | 0   | 0 | 101        | 224        |
| Grand Total | 19                        | 0 | 61   | 0 | 80         | 0                            | 117  | 16  | 0 | 133        | 0          | 0 | 0 | 0 | 0          | 39                           | 133  | 1   | 0 | 173        | 386        |
| Apprch %    | 23.8                      | 0 | 76.2 | 0 |            | 0                            | 88   | 12  | 0 |            | 0          | 0 | 0 | 0 |            | 22.5                         | 76.9 | 0.6 | 0 |            |            |
| Total %     | 4.9                       | 0 | 15.8 | 0 | 20.7       | 0                            | 30.3 | 4.1 | 0 | 34.5       | 0          | 0 | 0 | 0 | 0          | 10.1                         | 34.5 | 0.3 | 0 | 44.8       |            |

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719-633-2868

File Name : Firehouse View - Rolling Thunder Wy PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 2

|   | Firehouse View<br>Southbound |      |      |      |            | Rolling Thunder Wy<br>Westbound |      |      |      |            | Northbound |      |      |      |            | Rolling Thunder Wy<br>Eastbound |      |      |      |            |            |
|---|------------------------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|
| Start Time  | L                            | T    | R    | U    | App. Total | L                               | T    | R    | U    | App. Total | L          | T    | R    | U    | App. Total | L                               | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b> |                              |      |      |      |            |                                 |      |      |      |            |            |      |      |      |            |                                 |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 5:00:00 PM                |                              |      |      |      |            |                                 |      |      |      |            |            |      |      |      |            |                                 |      |      |      |            |            |
| 5:00:00 PM  | 7                            | 0    | 23   | 0    | 30         | 0                               | 15   | 5    | 0    | 20         | 0          | 0    | 0    | 0    | 0          | 12                              | 27   | 0    | 0    | 39         | 89         |
| 5:15:00 PM  | 4                            | 0    | 6    | 0    | 10         | 0                               | 14   | 0    | 0    | 14         | 0          | 0    | 0    | 0    | 0          | 6                               | 17   | 0    | 0    | 23         | 47         |
| 5:30:00 PM  | 0                            | 0    | 8    | 0    | 8          | 0                               | 24   | 0    | 0    | 24         | 0          | 0    | 0    | 0    | 0          | 2                               | 15   | 0    | 0    | 17         | 49         |
| 5:45:00 PM  | 2                            | 0    | 1    | 0    | 3          | 0                               | 14   | 0    | 0    | 14         | 0          | 0    | 0    | 0    | 0          | 3                               | 19   | 0    | 0    | 22         | 39         |
| Total Volume  | 13                           | 0    | 38   | 0    | 51         | 0                               | 67   | 5    | 0    | 72         | 0          | 0    | 0    | 0    | 0          | 23                              | 78   | 0    | 0    | 101        | 224        |
| % App. Total  | 25.5                         | 0    | 74.5 | 0    |            | 0                               | 93.1 | 6.9  | 0    |            | 0          | 0    | 0    | 0    |            | 22.8                            | 77.2 | 0    | 0    |            |            |
| PHF   | .464                         | .000 | .413 | .000 | .425       | .000                            | .698 | .250 | .000 | .750       | .000       | .000 | .000 | .000 | .000       | .479                            | .722 | .000 | .000 | .647       | .629       |

# LSC Transportation Consultants, Inc.

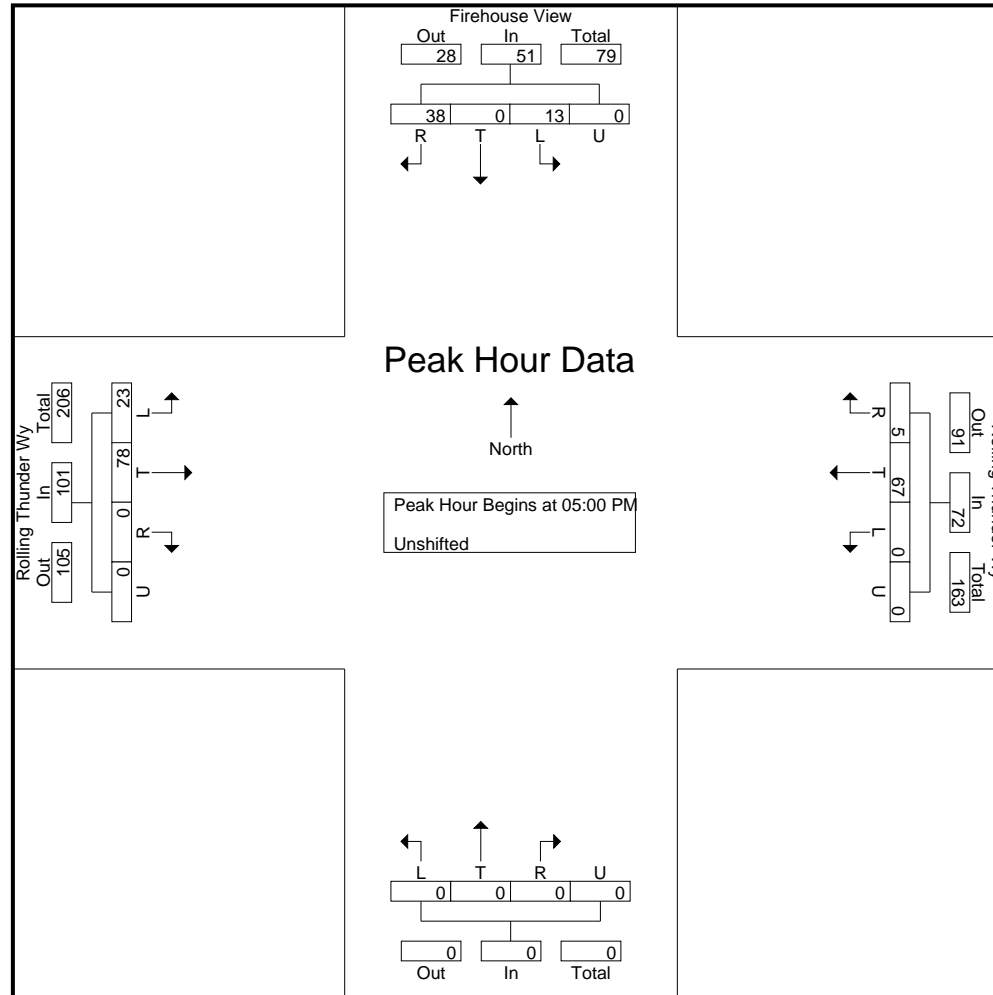
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy PM

Site Code : 00204440

Start Date : 7/1/2020

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# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy PM  
Site Code : 00204440  
Start Date : 7/1/2020  
Page No : 4

|   | Firehouse View Southbound |      |      |      |            | Rolling Thunder Wy Westbound |      |      |      |            | Northbound |      |      |      |            | Rolling Thunder Wy Eastbound |      |      |      |            |            |
|---|---------------------------|------|------|------|------------|------------------------------|------|------|------|------------|------------|------|------|------|------------|------------------------------|------|------|------|------------|------------|
| Start Time  | L                         | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | L          | T    | R    | U    | App. Total | L                            | T    | R    | U    | App. Total | Int. Total |
| <b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b> |                           |      |      |      |            |                              |      |      |      |            |            |      |      |      |            |                              |      |      |      |            |            |
| Peak Hour for Each Approach Begins at:                                |                           |      |      |      |            |                              |      |      |      |            |            |      |      |      |            |                              |      |      |      |            |            |
|   | 4:45:00 PM                |      |      |      |            | 5:00:00 PM                   |      |      |      |            | 4:00:00 PM |      |      |      |            | 5:00:00 PM                   |      |      |      |            |            |
| +0 mins.  | 1                         | 0    | 5    | 0    | 6          | 0                            | 15   | 5    | 0    | 20         | 0          | 0    | 0    | 0    | 0          | 12                           | 27   | 0    | 0    | 39         |            |
| +5 mins.  | 7                         | 0    | 23   | 0    | 30         | 0                            | 14   | 0    | 0    | 14         | 0          | 0    | 0    | 0    | 0          | 6                            | 17   | 0    | 0    | 23         |            |
| +10 mins.   | 4                         | 0    | 6    | 0    | 10         | 0                            | 24   | 0    | 0    | 24         | 0          | 0    | 0    | 0    | 0          | 2                            | 15   | 0    | 0    | 17         |            |
| +15 mins.   | 0                         | 0    | 8    | 0    | 8          | 0                            | 14   | 0    | 0    | 14         | 0          | 0    | 0    | 0    | 0          | 3                            | 19   | 0    | 0    | 22         |            |
| Total Volume  | 12                        | 0    | 42   | 0    | 54         | 0                            | 67   | 5    | 0    | 72         | 0          | 0    | 0    | 0    | 0          | 23                           | 78   | 0    | 0    | 101        |            |
| % App. Total  | 22.2                      | 0    | 77.8 | 0    |            | 0                            | 93.1 | 6.9  | 0    |            | 0          | 0    | 0    | 0    |            | 22.8                         | 77.2 | 0    | 0    |            |            |
| PHF   | .429                      | .000 | .457 | .000 | .450       | .000                         | .698 | .250 | .000 | .750       | .000       | .000 | .000 | .000 | .000       | .479                         | .722 | .000 | .000 | .647       |            |

# LSC Transportation Consultants, Inc.

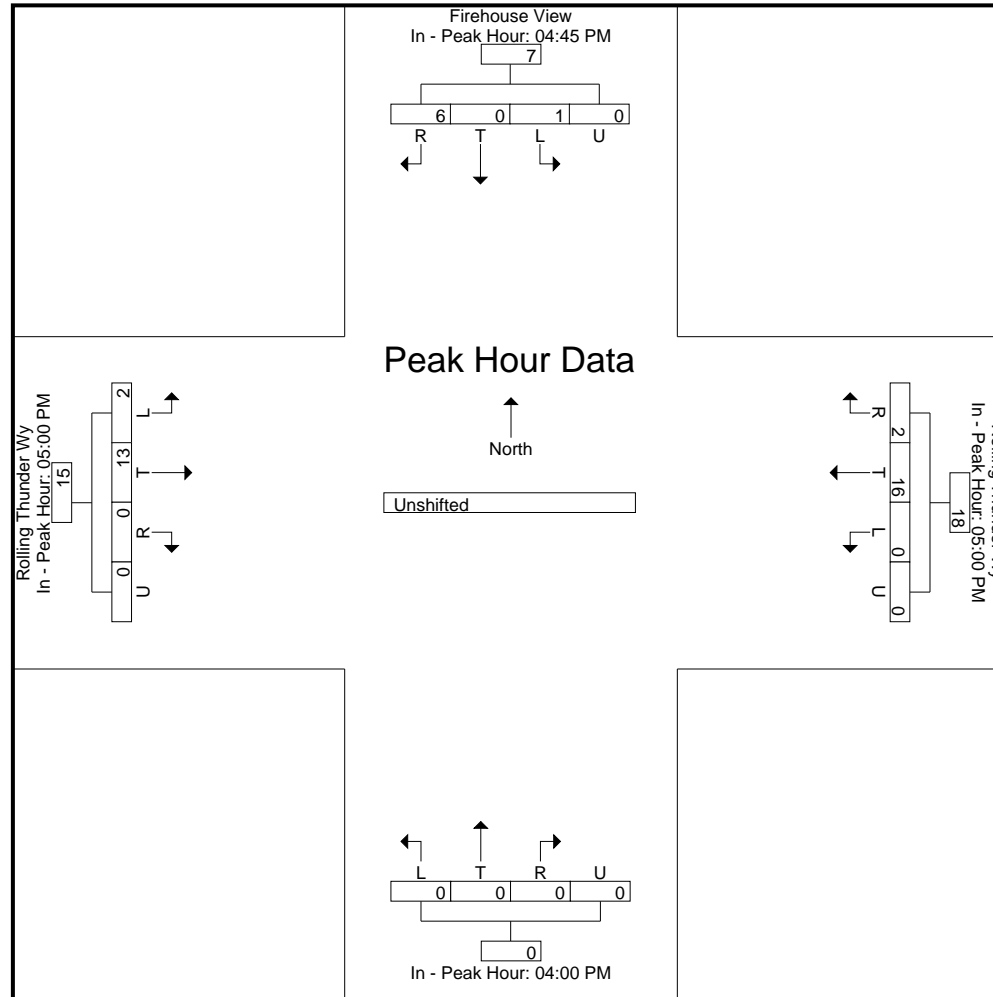
545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Firehouse View - Rolling Thunder Wy PM

Site Code : 00204440

Start Date : 7/1/2020

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# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Golden Sage Rd - Woodmen Rd AM 1-20

Site Code : 00194460

Start Date : 1/21/2020

Page No : 1

## Groups Printed- Unshifted

|             | Golden Sage Rd<br>Southbound |         |       |      |            | Woodmen Rd<br>Westbound |         |       |      |            | Golden Sage Rd<br>Northbound |         |       |      |            | Woodmen Rd<br>Eastbound |         |       |      |            |            |
|-------------|------------------------------|---------|-------|------|------------|-------------------------|---------|-------|------|------------|------------------------------|---------|-------|------|------------|-------------------------|---------|-------|------|------------|------------|
| Start Time  | Left                         | Through | Right | Peds | App. Total | Left                    | Through | Right | Peds | App. Total | Left                         | Through | Right | Peds | App. Total | Left                    | Through | Right | Peds | App. Total | Int. Total |
| 06:30 AM    | 5                            | 1       | 25    | 0    | 31         | 0                       | 195     | 48    | 1    | 244        | 20                           | 2       | 0     | 0    | 22         | 10                      | 107     | 0     | 0    | 117        | 414        |
| 06:45 AM    | 12                           | 5       | 28    | 0    | 45         | 4                       | 355     | 30    | 0    | 389        | 24                           | 4       | 0     | 0    | 28         | 14                      | 151     | 9     | 0    | 174        | 636        |
| Total       | 17                           | 6       | 53    | 0    | 76         | 4                       | 550     | 78    | 1    | 633        | 44                           | 6       | 0     | 0    | 50         | 24                      | 258     | 9     | 0    | 291        | 1050       |
| 07:00 AM    | 17                           | 7       | 29    | 0    | 53         | 2                       | 340     | 25    | 0    | 367        | 42                           | 2       | 1     | 0    | 45         | 13                      | 158     | 13    | 0    | 184        | 649        |
| 07:15 AM    | 8                            | 4       | 30    | 0    | 42         | 3                       | 424     | 16    | 0    | 443        | 44                           | 3       | 1     | 0    | 48         | 12                      | 171     | 11    | 0    | 194        | 727        |
| 07:30 AM    | 16                           | 4       | 25    | 1    | 46         | 6                       | 356     | 12    | 0    | 374        | 29                           | 4       | 1     | 0    | 34         | 8                       | 181     | 11    | 0    | 200        | 654        |
| 07:45 AM    | 7                            | 1       | 7     | 0    | 15         | 2                       | 293     | 17    | 0    | 312        | 13                           | 5       | 0     | 0    | 18         | 16                      | 209     | 20    | 0    | 245        | 590        |
| Total       | 48                           | 16      | 91    | 1    | 156        | 13                      | 1413    | 70    | 0    | 1496       | 128                          | 14      | 3     | 0    | 145        | 49                      | 719     | 55    | 0    | 823        | 2620       |
| 08:00 AM    | 9                            | 1       | 14    | 0    | 24         | 3                       | 239     | 12    | 1    | 255        | 18                           | 0       | 0     | 0    | 18         | 16                      | 165     | 13    | 1    | 195        | 492        |
| 08:15 AM    | 13                           | 2       | 12    | 0    | 27         | 2                       | 267     | 19    | 1    | 289        | 18                           | 3       | 2     | 0    | 23         | 28                      | 142     | 6     | 1    | 177        | 516        |
| Grand Total | 87                           | 25      | 170   | 1    | 283        | 22                      | 2469    | 179   | 3    | 2673       | 208                          | 23      | 5     | 0    | 236        | 117                     | 1284    | 83    | 2    | 1486       | 4678       |
| Apprch %    | 30.7                         | 8.8     | 60.1  | 0.4  |            | 0.8                     | 92.4    | 6.7   | 0.1  |            | 88.1                         | 9.7     | 2.1   | 0    |            | 7.9                     | 86.4    | 5.6   | 0.1  |            |            |
| Total %     | 1.9                          | 0.5     | 3.6   | 0    | 6          | 0.5                     | 52.8    | 3.8   | 0.1  | 57.1       | 4.4                          | 0.5     | 0.1   | 0    | 5          | 2.5                     | 27.4    | 1.8   | 0    | 31.8       |            |

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

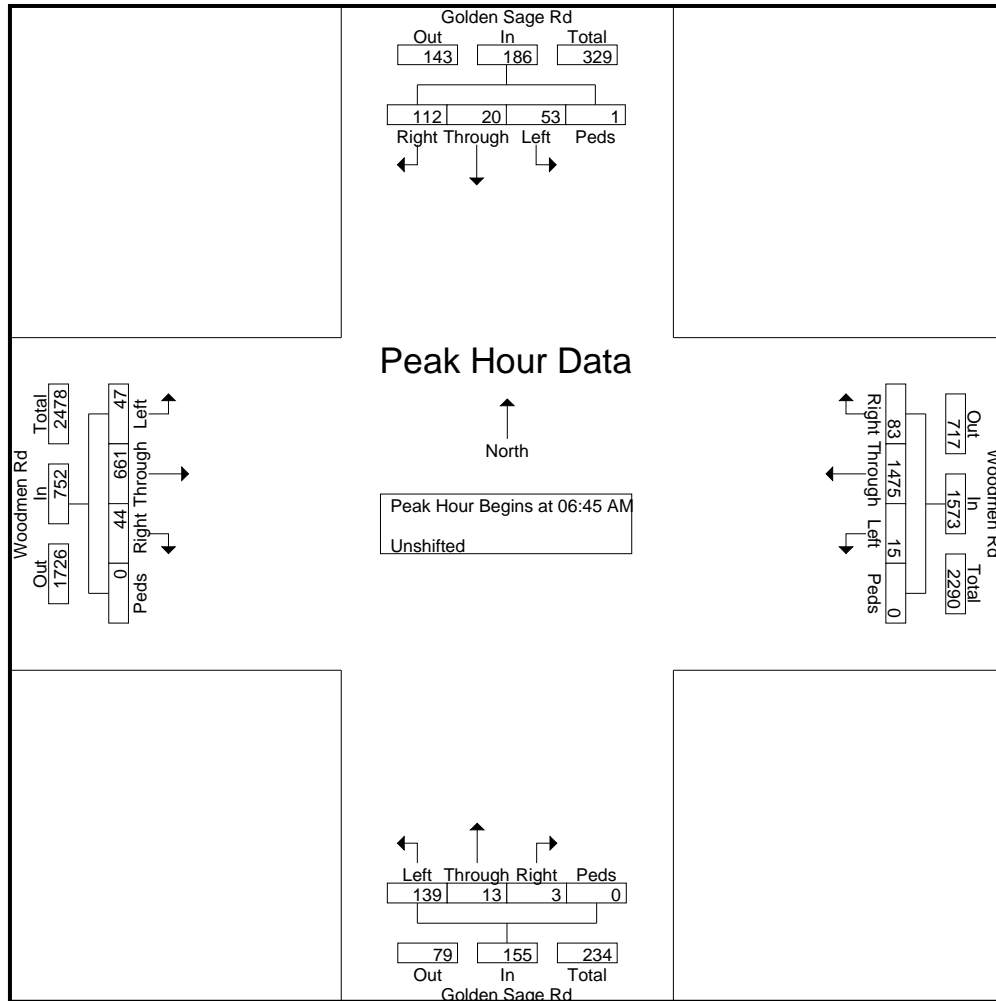
File Name : Golden Sage Rd - Woodmen Rd AM 1-20

Site Code : 00194460

Start Date : 1/21/2020

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|   | Golden Sage Rd Southbound |         |       |      |            | Woodmen Rd Westbound |         |       |      |            | Golden Sage Rd Northbound |         |       |      |            | Woodmen Rd Eastbound |         |       |      |            |            |
|---|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|------------|
| Start Time  | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Int. Total |
| <b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b> |                           |         |       |      |            |                      |         |       |      |            |                           |         |       |      |            |                      |         |       |      |            |            |
| Peak Hour for Entire Intersection Begins at 6:45:00 AM                |                           |         |       |      |            |                      |         |       |      |            |                           |         |       |      |            |                      |         |       |      |            |            |
| 6:45:00 AM  | 12                        | 5       | 28    | 0    | 45         | 4                    | 355     | 30    | 0    | 389        | 24                        | 4       | 0     | 0    | 28         | 14                   | 151     | 9     | 0    | 174        | 636        |
| 7:00:00 AM  | 17                        | 7       | 29    | 0    | 53         | 2                    | 340     | 25    | 0    | 367        | 42                        | 2       | 1     | 0    | 45         | 13                   | 158     | 13    | 0    | 184        | 649        |
| 7:15:00 AM  | 8                         | 4       | 30    | 0    | 42         | 3                    | 424     | 16    | 0    | 443        | 44                        | 3       | 1     | 0    | 48         | 12                   | 171     | 11    | 0    | 194        | 727        |
| 7:30:00 AM  | 16                        | 4       | 25    | 1    | 46         | 6                    | 356     | 12    | 0    | 374        | 29                        | 4       | 1     | 0    | 34         | 8                    | 181     | 11    | 0    | 200        | 654        |
| Total Volume  | 53                        | 20      | 112   | 1    | 186        | 15                   | 1475    | 83    | 0    | 1573       | 139                       | 13      | 3     | 0    | 155        | 47                   | 661     | 44    | 0    | 752        | 2666       |
| % App. Total  | 28.5                      | 10.8    | 60.2  | 0.5  |            | 1                    | 93.8    | 5.3   | 0    |            | 89.7                      | 8.4     | 1.9   | 0    |            | 6.2                  | 87.9    | 5.9   | 0    |            |            |
| PHF   | .779                      | .714    | .933  | .250 | .877       | .625                 | .870    | .692  | .000 | .888       | .790                      | .813    | .750  | .000 | .807       | .839                 | .913    | .846  | .000 | .940       | .917       |



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

File Name : Golden Sage Rd - Woodmen Rd AM 1-20

Site Code : 00194460

Start Date : 1/21/2020

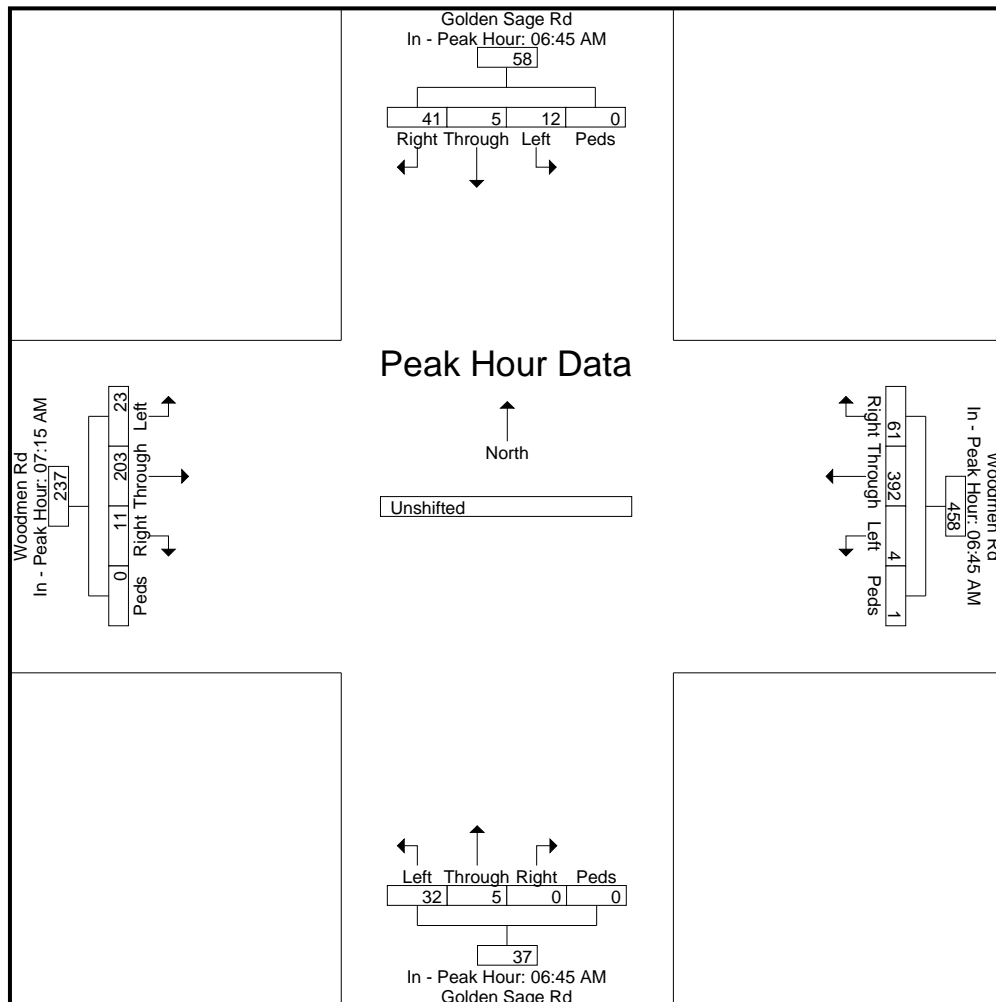
Page No : 3

|            | Golden Sage Rd Southbound |         |       |      |            | Woodmen Rd Westbound |         |       |      |            | Golden Sage Rd Northbound |         |       |      |            | Woodmen Rd Eastbound |         |       |      |            |            |
|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|------------|
| Start Time | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Int. Total |

## Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

|              | 6:45:00 AM |      |      |      |      | 6:45:00 AM |      |      |      |      | 6:45:00 AM |      |      |      |      | 7:15:00 AM |      |      |      |      |
|--------------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|
| +0 mins.     | 12         | 5    | 28   | 0    | 45   | 4          | 355  | 30   | 0    | 389  | 24         | 4    | 0    | 0    | 28   | 12         | 171  | 11   | 0    | 194  |
| +5 mins.     | 17         | 7    | 29   | 0    | 53   | 2          | 340  | 25   | 0    | 367  | 42         | 2    | 1    | 0    | 45   | 8          | 181  | 11   | 0    | 200  |
| +10 mins.    | 8          | 4    | 30   | 0    | 42   | 3          | 424  | 16   | 0    | 443  | 44         | 3    | 1    | 0    | 48   | 16         | 209  | 20   | 0    | 245  |
| +15 mins.    | 16         | 4    | 25   | 1    | 46   | 6          | 356  | 12   | 0    | 374  | 29         | 4    | 1    | 0    | 34   | 16         | 165  | 13   | 1    | 195  |
| Total Volume | 53         | 20   | 112  | 1    | 186  | 15         | 1475 | 83   | 0    | 1573 | 139        | 13   | 3    | 0    | 155  | 52         | 726  | 55   | 1    | 834  |
| % App. Total | 28.5       | 10.8 | 60.2 | 0.5  |      | 1          | 93.8 | 5.3  | 0    |      | 89.7       | 8.4  | 1.9  | 0    |      | 6.2        | 87.1 | 6.6  | 0.1  |      |
| PHF          | .779       | .714 | .933 | .250 | .877 | .625       | .870 | .692 | .000 | .888 | .790       | .813 | .750 | .000 | .807 | .813       | .868 | .688 | .250 | .851 |





# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

File Name : Golden Sage Rd - Woodmen Rd PM 1-20

Site Code : 00194460

Start Date : 1/21/2020

Page No : 1

## Groups Printed- Unshifted

|             | Golden Sage Rd<br>Southbound |         |       |      |            | Woodmen Rd<br>Westbound |         |       |      |            | Golden Sage Rd<br>Northbound |         |       |      |            | Woodmen Rd<br>Eastbound |         |       |      |            |            |
|-------------|------------------------------|---------|-------|------|------------|-------------------------|---------|-------|------|------------|------------------------------|---------|-------|------|------------|-------------------------|---------|-------|------|------------|------------|
| Start Time  | Left                         | Through | Right | Peds | App. Total | Left                    | Through | Right | Peds | App. Total | Left                         | Through | Right | Peds | App. Total | Left                    | Through | Right | Peds | App. Total | Int. Total |
| 04:00 PM    | 17                           | 2       | 26    | 0    | 45         | 7                       | 205     | 16    | 0    | 228        | 23                           | 9       | 5     | 0    | 37         | 21                      | 272     | 23    | 2    | 318        | 628        |
| 04:15 PM    | 7                            | 1       | 22    | 0    | 30         | 5                       | 241     | 26    | 0    | 272        | 26                           | 5       | 6     | 0    | 37         | 28                      | 325     | 12    | 1    | 366        | 705        |
| 04:30 PM    | 21                           | 4       | 24    | 0    | 49         | 1                       | 241     | 20    | 1    | 263        | 26                           | 8       | 4     | 0    | 38         | 24                      | 313     | 3     | 1    | 341        | 691        |
| 04:45 PM    | 29                           | 3       | 19    | 2    | 53         | 1                       | 202     | 24    | 0    | 227        | 16                           | 4       | 0     | 0    | 20         | 18                      | 341     | 10    | 1    | 370        | 670        |
| Total       | 74                           | 10      | 91    | 2    | 177        | 14                      | 889     | 86    | 1    | 990        | 91                           | 26      | 15    | 0    | 132        | 91                      | 1251    | 48    | 5    | 1395       | 2694       |
| 05:00 PM    | 18                           | 1       | 27    | 0    | 46         | 2                       | 254     | 11    | 2    | 269        | 27                           | 7       | 1     | 0    | 35         | 19                      | 328     | 11    | 0    | 358        | 708        |
| 05:15 PM    | 7                            | 2       | 6     | 0    | 15         | 8                       | 192     | 9     | 1    | 210        | 32                           | 10      | 12    | 0    | 54         | 23                      | 340     | 17    | 0    | 380        | 659        |
| 05:30 PM    | 42                           | 7       | 42    | 1    | 92         | 7                       | 227     | 23    | 0    | 257        | 30                           | 7       | 10    | 0    | 47         | 28                      | 336     | 6     | 0    | 370        | 766        |
| 05:45 PM    | 21                           | 1       | 18    | 0    | 40         | 1                       | 180     | 12    | 1    | 194        | 19                           | 5       | 5     | 0    | 29         | 18                      | 326     | 9     | 0    | 353        | 616        |
| Total       | 88                           | 11      | 93    | 1    | 193        | 18                      | 853     | 55    | 4    | 930        | 108                          | 29      | 28    | 0    | 165        | 88                      | 1330    | 43    | 0    | 1461       | 2749       |
| Grand Total | 162                          | 21      | 184   | 3    | 370        | 32                      | 1742    | 141   | 5    | 1920       | 199                          | 55      | 43    | 0    | 297        | 179                     | 2581    | 91    | 5    | 2856       | 5443       |
| Apprch %    | 43.8                         | 5.7     | 49.7  | 0.8  |            | 1.7                     | 90.7    | 7.3   | 0.3  |            | 67                           | 18.5    | 14.5  | 0    |            | 6.3                     | 90.4    | 3.2   | 0.2  |            |            |
| Total %     | 3                            | 0.4     | 3.4   | 0.1  | 6.8        | 0.6                     | 32      | 2.6   | 0.1  | 35.3       | 3.7                          | 1       | 0.8   | 0    | 5.5        | 3.3                     | 47.4    | 1.7   | 0.1  | 52.5       |            |

# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

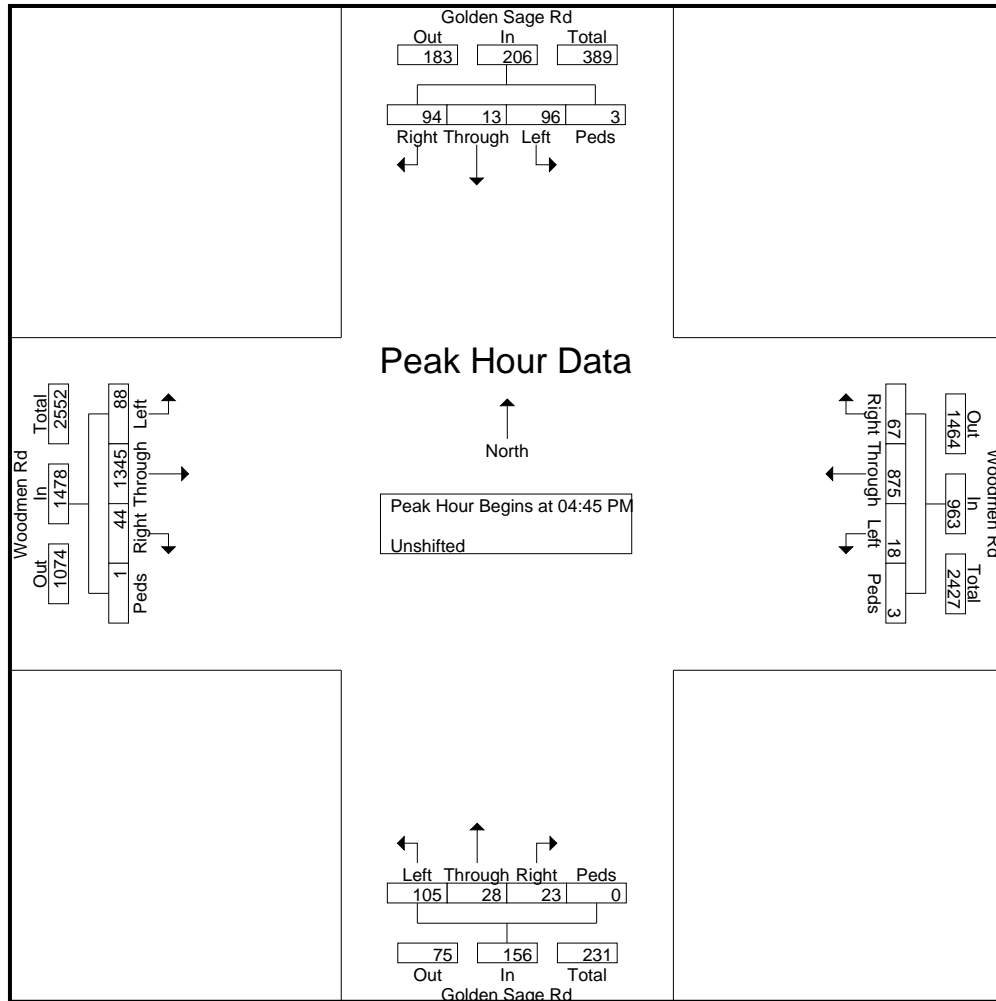
File Name : Golden Sage Rd - Woodmen Rd PM 1-20

Site Code : 00194460

Start Date : 1/21/2020

Page No : 2

|   | Golden Sage Rd Southbound |         |       |      |            | Woodmen Rd Westbound |         |       |      |            | Golden Sage Rd Northbound |         |       |      |            | Woodmen Rd Eastbound |         |       |      |            |            |
|---|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|------------|
| Start Time  | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Int. Total |
| <b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b> |                           |         |       |      |            |                      |         |       |      |            |                           |         |       |      |            |                      |         |       |      |            |            |
| Peak Hour for Entire Intersection Begins at 4:45:00 PM                |                           |         |       |      |            |                      |         |       |      |            |                           |         |       |      |            |                      |         |       |      |            |            |
| 4:45:00 PM  | 29                        | 3       | 19    | 2    | 53         | 1                    | 202     | 24    | 0    | 227        | 16                        | 4       | 0     | 0    | 20         | 18                   | 341     | 10    | 1    | 370        | 670        |
| 5:00:00 PM  | 18                        | 1       | 27    | 0    | 46         | 2                    | 254     | 11    | 2    | 269        | 27                        | 7       | 1     | 0    | 35         | 19                   | 328     | 11    | 0    | 358        | 708        |
| 5:15:00 PM  | 7                         | 2       | 6     | 0    | 15         | 8                    | 192     | 9     | 1    | 210        | 32                        | 10      | 12    | 0    | 54         | 23                   | 340     | 17    | 0    | 380        | 659        |
| 5:30:00 PM  | 42                        | 7       | 42    | 1    | 92         | 7                    | 227     | 23    | 0    | 257        | 30                        | 7       | 10    | 0    | 47         | 28                   | 336     | 6     | 0    | 370        | 766        |
| Total Volume  | 96                        | 13      | 94    | 3    | 206        | 18                   | 875     | 67    | 3    | 963        | 105                       | 28      | 23    | 0    | 156        | 88                   | 1345    | 44    | 1    | 1478       | 2803       |
| % App. Total  | 46.6                      | 6.3     | 45.6  | 1.5  |            | 1.9                  | 90.9    | 7     | 0.3  |            | 67.3                      | 17.9    | 14.7  | 0    |            | 6                    | 91      | 3     | 0.1  |            |            |
| PHF   | .571                      | .464    | .560  | .375 | .560       | .563                 | .861    | .698  | .375 | .895       | .820                      | .700    | .479  | .000 | .722       | .786                 | .986    | .647  | .250 | .972       | .915       |



# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

File Name : Golden Sage Rd - Woodmen Rd PM 1-20

Site Code : 00194460

Start Date : 1/21/2020

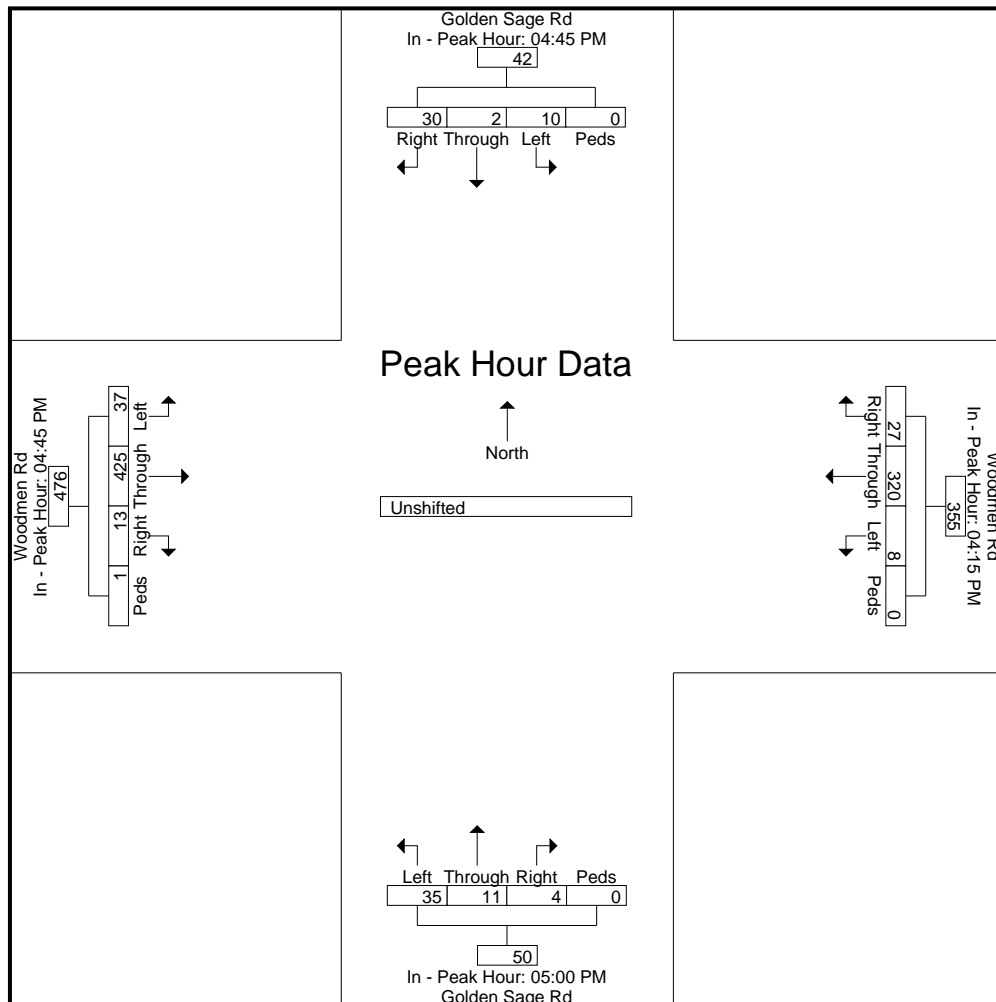
Page No : 3

|            | Golden Sage Rd Southbound |         |       |      |            | Woodmen Rd Westbound |         |       |      |            | Golden Sage Rd Northbound |         |       |      |            | Woodmen Rd Eastbound |         |       |      |            |            |
|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|---------------------------|---------|-------|------|------------|----------------------|---------|-------|------|------------|------------|
| Start Time | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Left                      | Through | Right | Peds | App. Total | Left                 | Through | Right | Peds | App. Total | Int. Total |

## Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

|              | 4:45:00 PM |      |      |      |      | 4:15:00 PM |      |      |      |      | 5:00:00 PM |      |      |      |      | 4:45:00 PM |      |      |      |      |
|--------------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|
| +0 mins.     | 29         | 3    | 19   | 2    | 53   | 5          | 241  | 26   | 0    | 272  | 27         | 7    | 1    | 0    | 35   | 18         | 341  | 10   | 1    | 370  |
| +5 mins.     | 18         | 1    | 27   | 0    | 46   | 1          | 241  | 20   | 1    | 263  | 32         | 10   | 12   | 0    | 54   | 19         | 328  | 11   | 0    | 358  |
| +10 mins.    | 7          | 2    | 6    | 0    | 15   | 1          | 202  | 24   | 0    | 227  | 30         | 7    | 10   | 0    | 47   | 23         | 340  | 17   | 0    | 380  |
| +15 mins.    | 42         | 7    | 42   | 1    | 92   | 2          | 254  | 11   | 2    | 269  | 19         | 5    | 5    | 0    | 29   | 28         | 336  | 6    | 0    | 370  |
| Total Volume | 96         | 13   | 94   | 3    | 206  | 9          | 938  | 81   | 3    | 1031 | 108        | 29   | 28   | 0    | 165  | 88         | 1345 | 44   | 1    | 1478 |
| % App. Total | 46.6       | 6.3  | 45.6 | 1.5  |      | 0.9        | 91   | 7.9  | 0.3  |      | 65.5       | 17.6 | 17   | 0    |      | 6          | 91   | 3    | 0.1  |      |
| PHF          | .571       | .464 | .560 | .375 | .560 | .450       | .923 | .779 | .375 | .948 | .844       | .725 | .583 | .000 | .764 | .786       | .986 | .647 | .250 | .972 |






# Levels of Service

---

HCM 6th TWSC  
1: Firehouse View & Maltese Point

Existing  
AM Peak Hour





| Intersection             |   |      |        |   |   |       |
|--------------------------|---|------|--------|---|---|-------|
| Int Delay, s/veh         | 7.3   |      |        |   |   |       |
| Movement                 | EBT   | EBR  | WBL    | WBT   | NBL   | NBR   |
| Lane Configurations      |  |      |        |  |  |       |
| Traffic Vol, veh/h       | 1   | 0    | 5      | 1   | 2   | 24    |
| Future Vol, veh/h        | 1   | 0    | 5      | 1   | 2   | 24    |
| Conflicting Peds, #/hr   | 0   | 0    | 0      | 0   | 0   | 0     |
| Sign Control             | Free  | Free | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -   | None | -      | None  | -   | None  |
| Storage Length           | -   | -    | -      | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -    | -      | 0   | 0   | -     |
| Grade, %                 | 0   | -    | -      | 0   | 0   | -     |
| Peak Hour Factor         | 25  | 25   | 75     | 75  | 81  | 81    |
| Heavy Vehicles, %        | 2   | 2    | 2      | 2   | 2   | 2     |
| Mvmt Flow                | 4   | 0    | 7      | 1   | 2   | 30    |
|                          |   |      |        |   |   |       |
| Major/Minor              | Major1  |      | Major2 |   | Minor1  |       |
| Conflicting Flow All     | 0   | 0    | 4      | 0   | 19  | 4     |
| Stage 1                  | -   | -    | -      | -   | 4   | -     |
| Stage 2                  | -   | -    | -      | -   | 15  | -     |
| Critical Hdwy            | -   | -    | 4.12   | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -    | -      | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -    | -      | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -    | 2.218  | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -    | 1618   | -   | 998   | 1080  |
| Stage 1                  | -   | -    | -      | -   | 1019  | -     |
| Stage 2                  | -   | -    | -      | -   | 1008  | -     |
| Platoon blocked, %       | -   | -    |        | -   |   |       |
| Mov Cap-1 Maneuver       | -   | -    | 1618   | -   | 994   | 1080  |
| Mov Cap-2 Maneuver       | -   | -    | -      | -   | 994   | -     |
| Stage 1                  | -   | -    | -      | -   | 1019  | -     |
| Stage 2                  | -   | -    | -      | -   | 1004  | -     |
|                          |   |      |        |   |   |       |
|                          |   |      |        |   |   |       |
| Approach                 | EB  |      | WB     |   | NB  |       |
| HCM Control Delay, s     | 0   |      | 6      |   | 8.5   |       |
| HCM LOS                  |   |      |        |   | A   |       |
|                          |   |      |        |   |   |       |
|                          |   |      |        |   |   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT  | EBR    | WBL   | WBT   |       |
| Capacity (veh/h)         | 1073  | -    | -      | 1618  | -   |       |
| HCM Lane V/C Ratio       | 0.03  | -    | -      | 0.004   | -   |       |
| HCM Control Delay (s)    | 8.5   | -    | -      | 7.2   | 0   |       |
| HCM Lane LOS             | A   | -    | -      | A   | A   |       |
| HCM 95th %tile Q(veh)    | 0.1   | -    | -      | 0   | -   |       |

HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Existing  
AM Peak Hour

Intersection

Int Delay, s/veh 1.7

| Movement                 | EBL   | EBT   | WBT   | WBR  | SBL   | SBR  |
|--------------------------|---|---|---|------|---|------|
| Lane Configurations      |  |  |  |      |  |      |
| Traffic Vol, veh/h       | 22  | 20  | 70  | 4    | 1   | 4    |
| Future Vol, veh/h        | 22  | 20  | 70  | 4    | 1   | 4    |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0    |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop |
| RT Channelized           | -   | None  | -   | None | -   | None |
| Storage Length           | 0   | -   | -   | -    | 0   | -    |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -    |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -    |
| Peak Hour Factor         | 90  | 90  | 77  | 77   | 62  | 62   |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2    |
| Mvmt Flow                | 24  | 22  | 91  | 5    | 2   | 6    |




| Major/Minor          | Major1 | Major2 | Minor2        |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 96     | 0      | 0 164 94      |
| Stage 1              | -      | -      | - 94 -        |
| Stage 2              | -      | -      | - 70 -        |
| Critical Hdwy        | 4.12   | -      | - 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | - 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | - 5.42 -      |
| Follow-up Hdwy       | 2.218  | -      | - 3.518 3.318 |
| Pot Cap-1 Maneuver   | 1498   | -      | - 827 963     |
| Stage 1              | -      | -      | - 930 -       |
| Stage 2              | -      | -      | - 953 -       |
| Platoon blocked, %   |        | -      | -             |
| Mov Cap-1 Maneuver   | 1498   | -      | - 814 963     |
| Mov Cap-2 Maneuver   | -      | -      | - 814 -       |
| Stage 1              | -      | -      | - 915 -       |
| Stage 2              | -      | -      | - 953 -       |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 3.9 | 0  | 8.9 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1498  | -   | -   | -   | 929   |
| HCM Lane V/C Ratio    | 0.016 | -   | -   | -   | 0.009 |
| HCM Control Delay (s) | 7.4   | -   | -   | -   | 8.9   |
| HCM Lane LOS          | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

HCM 6th TWSC  
1: Firehouse View & Maltese Point

Existing  
PM Peak Hour

| Intersection             |   |      |        |   |   |       |
|--------------------------|---|------|--------|---|---|-------|
| Int Delay, s/veh         | 4.6   |      |        |   |   |       |
| Movement                 | EBT   | EBR  | WBL    | WBT   | NBL   | NBR   |
| Lane Configurations      |  |      |        |  |  |       |
| Traffic Vol, veh/h       | 0   | 38   | 17     | 0   | 34  | 2     |
| Future Vol, veh/h        | 0   | 38   | 17     | 0   | 34  | 2     |
| Conflicting Peds, #/hr   | 0   | 0    | 0      | 0   | 0   | 0     |
| Sign Control             | Free  | Free | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -   | None | -      | None  | -   | None  |
| Storage Length           | -   | -    | -      | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -    | -      | 0   | 0   | -     |
| Grade, %                 | 0   | -    | -      | 0   | 0   | -     |
| Peak Hour Factor         | 38  | 38   | 47     | 47  | 50  | 50    |
| Heavy Vehicles, %        | 2   | 2    | 2      | 2   | 2   | 2     |
| Mvmt Flow                | 0   | 100  | 36     | 0   | 68  | 4     |
|                          |   |      |        |   |   |       |
| Major/Minor              | Major1  |      | Major2 |   | Minor1  |       |
| Conflicting Flow All     | 0   | 0    | 100    | 0   | 122   | 50    |
| Stage 1                  | -   | -    | -      | -   | 50  | -     |
| Stage 2                  | -   | -    | -      | -   | 72  | -     |
| Critical Hdwy            | -   | -    | 4.12   | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -    | -      | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -    | -      | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -    | 2.218  | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -    | 1493   | -   | 873   | 1018  |
| Stage 1                  | -   | -    | -      | -   | 972   | -     |
| Stage 2                  | -   | -    | -      | -   | 951   | -     |
| Platoon blocked, %       | -   | -    |        | -   |   |       |
| Mov Cap-1 Maneuver       | -   | -    | 1493   | -   | 852   | 1018  |
| Mov Cap-2 Maneuver       | -   | -    | -      | -   | 852   | -     |
| Stage 1                  | -   | -    | -      | -   | 972   | -     |
| Stage 2                  | -   | -    | -      | -   | 928   | -     |
|                          |   |      |        |   |   |       |
|                          |   |      |        |   |   |       |
| Approach                 | EB  |      | WB     |   | NB  |       |
| HCM Control Delay, s     | 0   |      | 7.5    |   | 9.6   |       |
| HCM LOS                  | A   |      |        |   |   |       |
|                          |   |      |        |   |   |       |
|                          |   |      |        |   |   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT  | EBR    | WBL   | WBT   |       |
| Capacity (veh/h)         | 860   | -    | -      | 1493  | -   |       |
| HCM Lane V/C Ratio       | 0.084   | -    | -      | 0.024   | -   |       |
| HCM Control Delay (s)    | 9.6   | -    | -      | 7.5   | 0   |       |
| HCM Lane LOS             | A   | -    | -      | A   | A   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -    | -      | 0.1   | -   |       |





HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Existing  
PM Peak Hour

Intersection

Int Delay, s/veh 3.9

Movement EBL EBT WBT WBR SBL SBR

|                          |   |   |   |      |   |      |
|--------------------------|---|---|---|------|---|------|
| Lane Configurations      |  |  |  |      |  |      |
| Traffic Vol, veh/h       | 23  | 78  | 67  | 5    | 13  | 38   |
| Future Vol, veh/h        | 23  | 78  | 67  | 5    | 13  | 38   |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0    |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop |
| RT Channelized           | -   | None  | -   | None | -   | None |
| Storage Length           | 0   | -   | -   | -    | 0   | -    |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -    |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -    |
| Peak Hour Factor         | 65  | 65  | 75  | 75   | 42  | 42   |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2    |
| Mvmt Flow                | 35  | 120   | 89  | 7    | 31  | 90   |

Major/Minor Major1 Major2 Minor2

|                      |       |   |   |   |       |       |
|----------------------|-------|---|---|---|-------|-------|
| Conflicting Flow All | 96    | 0 | - | 0 | 283   | 93    |
| Stage 1              | -     | - | - | - | 93    | -     |
| Stage 2              | -     | - | - | - | 190   | -     |
| Critical Hdwy        | 4.12  | - | - | - | 6.42  | 6.22  |
| Critical Hdwy Stg 1  | -     | - | - | - | 5.42  | -     |
| Critical Hdwy Stg 2  | -     | - | - | - | 5.42  | -     |
| Follow-up Hdwy       | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver   | 1498  | - | - | - | 707   | 964   |
| Stage 1              | -     | - | - | - | 931   | -     |
| Stage 2              | -     | - | - | - | 842   | -     |
| Platoon blocked, %   |       | - | - | - |       |       |
| Mov Cap-1 Maneuver   | 1498  | - | - | - | 691   | 964   |
| Mov Cap-2 Maneuver   | -     | - | - | - | 691   | -     |
| Stage 1              | -     | - | - | - | 910   | -     |
| Stage 2              | -     | - | - | - | 842   | -     |

Approach EB WB SB

|                      |     |   |     |
|----------------------|-----|---|-----|
| HCM Control Delay, s | 1.7 | 0 | 9.8 |
| HCM LOS              |     |   | A   |























Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

|                       |       |   |   |   |       |
|-----------------------|-------|---|---|---|-------|
| Capacity (veh/h)      | 1498  | - | - | - | 876   |
| HCM Lane V/C Ratio    | 0.024 | - | - | - | 0.139 |
| HCM Control Delay (s) | 7.5   | - | - | - | 9.8   |
| HCM Lane LOS          | A     | - | - | - | A     |
| HCM 95th %tile Q(veh) | 0.1   | - | - | - | 0.5   |



# Timings 25: Golden Sage & Woodmen

Existing Traffic  
AM Peak Hour

|                      |  |  |  |  |  |  |   |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 47  | 661   | 44  | 15  | 1475  | 83  | 134   | 13  | 3   | 53  | 20  |
| Future Volume (vph)  | 47  | 661   | 44  | 15  | 1475  | 83  | 134   | 13  | 3   | 53  | 20  |
| Turn Type            | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm  | NA  |
| Protected Phases     |   | 2   |   |   | 6   |   |   | 8   |   |   | 4   |
| Permitted Phases     | 2   |   | 2   | 6   |   | 6   | 8   |   | 8   | 4   |   |
| Detector Phase       | 2   | 2   | 2   | 6   | 6   | 6   | 8   | 8   | 8   | 4   | 4   |
| Switch Phase         |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 21.5  | 21.5  | 21.5  | 21.5  | 21.5  |
| Total Split (s)      | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)      | 70.0%   | 70.0%   | 70.0%   | 70.0%   | 70.0%   | 70.0%   | 30.0%   | 30.0%   | 30.0%   | 30.0%   | 30.0%   |
| Yellow Time (s)      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |
| Lead/Lag             |   |   |   |   |   |   |   |   |   |   |   |
| Lead-Lag Optimize?   |   |   |   |   |   |   |   |   |   |   |   |
| Recall Mode          | Max   | Max   | Max   | Max   | Max   | Max   | None  | None  | None  | None  | None  |
| Act Effect Green (s) | 56.2  | 56.2  | 56.2  | 56.2  | 56.2  | 56.2  | 16.4  | 16.4  | 16.4  | 16.4  | 16.4  |
| Actuated g/C Ratio   | 0.66  | 0.66  | 0.66  | 0.66  | 0.66  | 0.66  | 0.19  | 0.19  | 0.19  | 0.19  | 0.19  |
| v/c Ratio            | 0.44  | 0.31  | 0.05  | 0.04  | 0.71  | 0.09  | 0.76  | 0.04  | 0.01  | 0.24  | 0.47  |
| Control Delay        | 23.6  | 7.1   | 2.2   | 6.6   | 12.2  | 1.8   | 54.1  | 27.1  | 0.0   | 30.7  | 28.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 23.6  | 7.1   | 2.2   | 6.6   | 12.2  | 1.8   | 54.1  | 27.1  | 0.0   | 30.7  | 28.9  |
| LOS                  | C   | A   | A   | A   | B   | A   | D   | C   | A   | C   | C   |
| Approach Delay       |   | 7.9   |   |   | 11.6  |   |   | 50.6  |   |   | 29.4  |
| Approach LOS         |   | A   |   |   | B   |   |   | D   |   |   | C   |

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 85.1

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 71.2%

ICU Level of Service C























Analysis Period (min) 15

Splits and Phases: 25: Golden Sage & Woodmen



# Timings 25: Golden Sage & Woodmen

Existing Traffic  
PM Peak Hour

|                      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 88  | 1345  | 44  | 18  | 875   | 67  | 105  | 28  | 23  | 96  | 13  |
| Future Volume (vph)  | 88  | 1345  | 44  | 18  | 875   | 67  | 105  | 28  | 23  | 96  | 13  |
| Turn Type            | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm   | NA  | Perm  | Perm  | NA  |
| Protected Phases     |   | 2   |   |   | 6   |   |  | 8   |   |   | 4   |
| Permitted Phases     | 2   |   | 2   | 6   |   | 6   | 8  |   | 8   | 4   |   |
| Detector Phase       | 2   | 2   | 2   | 6   | 6   | 6   | 8  | 8   | 8   | 4   | 4   |
| Switch Phase         |   |   |   |   |   |   |  |   |   |   |   |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 21.5   | 21.5  | 21.5  | 21.5  | 21.5  |
| Total Split (s)      | 65.0  | 65.0  | 65.0  | 65.0  | 65.0  | 65.0  | 25.0   | 25.0  | 25.0  | 25.0  | 25.0  |
| Total Split (%)      | 72.2%   | 72.2%   | 72.2%   | 72.2%   | 72.2%   | 72.2%   | 27.8%  | 27.8%   | 27.8%   | 27.8%   | 27.8%   |
| Yellow Time (s)      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 3.5  | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | -3.0  | -3.0  | -1.0  | -3.0  | -3.0  | -1.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   | 4.5  | 5.5   | 5.5   | 5.5   | 5.5   |
| Lead/Lag             |   |   |   |   |   |   |  |   |   |   |   |
| Lead-Lag Optimize?   |   |   |   |   |   |   |  |   |   |   |   |
| Recall Mode          | Max   | Max   | Max   | Max   | Max   | Max   | None   | None  | None  | None  | None  |
| Act Effect Green (s) | 58.1  | 61.1  | 61.1  | 59.1  | 61.1  | 61.1  | 16.2   | 15.2  | 15.2  | 15.2  | 15.2  |
| Actuated g/C Ratio   | 0.68  | 0.71  | 0.71  | 0.69  | 0.71  | 0.71  | 0.19   | 0.18  | 0.18  | 0.18  | 0.18  |
| v/c Ratio            | 0.25  | 0.58  | 0.04  | 0.11  | 0.37  | 0.06  | 0.69   | 0.10  | 0.09  | 0.71  | 0.45  |
| Control Delay        | 8.5   | 7.7   | 1.6   | 7.3   | 5.8   | 1.4   | 52.4   | 29.6  | 4.7   | 49.6  | 10.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 8.5   | 7.7   | 1.6   | 7.3   | 5.8   | 1.4   | 52.4   | 29.6  | 4.7   | 49.6  | 10.6  |
| LOS                  | A   | A   | A   | A   | A   | A   | D  | C   | A   | D   | B   |
| Approach Delay       |   | 7.6   |   |   | 5.5   |   |  | 41.2  |   |   | 29.0  |
| Approach LOS         |   | A   |   |   | A   |   |  | D   |   |   | C   |

## Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 85.8

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 11.3

Intersection LOS: B




Intersection Capacity Utilization 65.9%





ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 25: Golden Sage & Woodmen



























| Intersection             |   |        |       |   |   |       |
|--------------------------|---|--------|-------|---|---|-------|
| Int Delay, s/veh         | 6   |        |       |   |   |       |
| Movement                 | EBT   | EBR    | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations      |  |        |       |  |  |       |
| Traffic Vol, veh/h       | 1   | 11     | 24    | 1   | 16  | 53    |
| Future Vol, veh/h        | 1   | 11     | 24    | 1   | 16  | 53    |
| Conflicting Peds, #/hr   | 0   | 0      | 0     | 0   | 0   | 0     |
| Sign Control             | Free  | Free   | Free  | Free  | Stop  | Stop  |
| RT Channelized           | -   | None   | -     | None  | -   | None  |
| Storage Length           | -   | -      | -     | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -      | -     | 0   | 0   | -     |
| Grade, %                 | 0   | -      | -     | 0   | 0   | -     |
| Peak Hour Factor         | 25  | 25     | 75    | 75  | 81  | 81    |
| Heavy Vehicles, %        | 2   | 2      | 2     | 2   | 2   | 2     |
| Mvmt Flow                | 4   | 44     | 32    | 1   | 20  | 65    |
| Major/Minor              | Major1  | Major2 |       | Minor1  |   |       |
| Conflicting Flow All     | 0   | 0      | 48    | 0   | 91  | 26    |
| Stage 1                  | -   | -      | -     | -   | 26  | -     |
| Stage 2                  | -   | -      | -     | -   | 65  | -     |
| Critical Hdwy            | -   | -      | 4.12  | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -      | -     | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -      | -     | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -      | 2.218 | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -      | 1559  | -   | 909   | 1050  |
| Stage 1                  | -   | -      | -     | -   | 997   | -     |
| Stage 2                  | -   | -      | -     | -   | 958   | -     |
| Platoon blocked, %       | -   | -      | -     | -   | -   | -     |
| Mov Cap-1 Maneuver       | -   | -      | 1559  | -   | 890   | 1050  |
| Mov Cap-2 Maneuver       | -   | -      | -     | -   | 890   | -     |
| Stage 1                  | -   | -      | -     | -   | 997   | -     |
| Stage 2                  | -   | -      | -     | -   | 938   | -     |
| Approach                 | EB  |        | WB    |   | NB  |       |
| HCM Control Delay, s     | 0   |        | 7.1   |   | 8.9   |       |
| HCM LOS                  |   |        |       |   | A   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT    | EBR   | WBL   | WBT   |       |
| Capacity (veh/h)         | 1008  | -      | -     | 1559  | -   |       |
| HCM Lane V/C Ratio       | 0.085   | -      | -     | 0.021   | -   |       |
| HCM Control Delay (s)    | 8.9   | -      | -     | 7.4   | 0   |       |
| HCM Lane LOS             | A   | -      | -     | A   | A   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -      | -     | 0.1   | -   |       |

| Intersection             |   |   |   |      |   |       |
|--------------------------|---|---|---|------|---|-------|
| Int Delay, s/veh         | 2.3   |   |   |      |   |       |
| Movement                 | EBL   | EBT   | WBT   | WBR  | SBL   | SBR   |
| Lane Configurations      |  |  |  |      |  |       |
| Traffic Vol, veh/h       | 55  | 118   | 174   | 14   | 9   | 32    |
| Future Vol, veh/h        | 55  | 118   | 174   | 14   | 9   | 32    |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0     |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop  |
| RT Channelized           | -   | None  | -   | None | -   | None  |
| Storage Length           | 0   | -   | -   | -    | 0   | -     |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -     |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -     |
| Peak Hour Factor         | 90  | 90  | 77  | 77   | 62  | 62    |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2     |
| Mvmt Flow                | 61  | 131   | 226   | 18   | 15  | 52    |
| Major/Minor              | Major1  | Major2  | Minor2  |      |   |       |
| Conflicting Flow All     | 244   | 0   | -   | 0    | 488   | 235   |
| Stage 1                  | -   | -   | -   | -    | 235   | -     |
| Stage 2                  | -   | -   | -   | -    | 253   | -     |
| Critical Hdwy            | 4.12  | -   | -   | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -   | -   | -    | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -   | -   | -    | 5.42  | -     |
| Follow-up Hdwy           | 2.218   | -   | -   | -    | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | 1322  | -   | -   | -    | 539   | 804   |
| Stage 1                  | -   | -   | -   | -    | 804   | -     |
| Stage 2                  | -   | -   | -   | -    | 789   | -     |
| Platoon blocked, %       |   | -   | -   | -    |   |       |
| Mov Cap-1 Maneuver       | 1322  | -   | -   | -    | 514   | 804   |
| Mov Cap-2 Maneuver       | -   | -   | -   | -    | 514   | -     |
| Stage 1                  | -   | -   | -   | -    | 767   | -     |
| Stage 2                  | -   | -   | -   | -    | 789   | -     |
| Approach                 | EB  | WB  |   | SB   |   |       |
| HCM Control Delay, s     | 2.5   | 0   |   | 10.5 |   |       |
| HCM LOS                  |   |   |   | B    |   |       |
| Minor Lane/Major Mvmt    | EBL   | EBT   | WBT   | WBR  | SBLn1   |       |
| Capacity (veh/h)         | 1322  | -   | -   | -    | 715   |       |
| HCM Lane V/C Ratio       | 0.046   | -   | -   | -    | 0.092   |       |
| HCM Control Delay (s)    | 7.9   | -   | -   | -    | 10.5  |       |
| HCM Lane LOS             | A   | -   | -   | -    | B   |       |
| HCM 95th %tile Q(veh)    | 0.1   | -   | -   | -    | 0.3   |       |

Lanes, Volumes, Timings  
25: Golden Sage Rd & Woodmen Rd

Long Term Background  
AM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 319   | 734   | 74  | 66  | 1776  | 110   | 162  | 20  | 48  | 98  | 25  | 392   |
| Future Volume (vph)     | 319   | 734   | 74  | 66  | 1776  | 110   | 162  | 20  | 48  | 98  | 25  | 392   |
| Satd. Flow (prot)       | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770   | 1863  | 1583  | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.950   |   |   | 0.367   |   |   | 0.429  |   |   | 0.744   |   |   |
| Satd. Flow (perm)       | 3433  | 3539  | 1583  | 684   | 3539  | 1583  | 799  | 1863  | 1583  | 1386  | 1863  | 1583  |
| Satd. Flow (RTOR)       |   |   | 109   |   |   | 155   |  |   | 173   |   |   | 281   |
| Peak Hour Factor        | 0.95  | 0.98  | 0.95  | 0.95  | 0.98  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)   | 336   | 749   | 78  | 69  | 1812  | 116   | 171  | 21  | 51  | 103   | 26  | 413   |
| Turn Type               | Prot  | NA  | Perm  | pm+pt   | NA  | Perm  | pm+pt  | NA  | Perm  | pm+pt   | NA  | Free  |
| Protected Phases        | 5   | 2   |   | 1   | 6   |   | 3  | 8   |   | 7   | 4   |   |
| Permitted Phases        |   |   | 2   | 6   |   | 6   | 8  |   | 8   | 4   |   | Free  |
| Detector Phase          | 5   | 2   | 2   | 1   | 6   | 6   | 3  | 8   | 8   | 7   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |   |
| Minimum Split (s)       | 10.0  | 12.0  | 12.0  | 10.0  | 12.0  | 12.0  | 10.0   | 10.0  | 10.0  | 10.0  | 10.0  |   |
| Total Split (s)         | 21.0  | 71.0  | 71.0  | 10.0  | 60.0  | 60.0  | 24.0   | 15.0  | 15.0  | 24.0  | 15.0  |   |
| Total Split (%)         | 17.5%   | 59.2%   | 59.2%   | 8.3%  | 50.0%   | 50.0%   | 20.0%  | 12.5%   | 12.5%   | 20.0%   | 12.5%   |   |
| Yellow Time (s)         | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   | 5.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0   | -1.0  | -1.0  | -1.0  | -1.0  |   |
| Total Lost Time (s)     | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   | 6.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead   | Lag   | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |   |
| Recall Mode             | None  | Min   | Min   | None  | Min   | Min   | None   | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 15.4  | 66.3  | 66.3  | 62.6  | 54.5  | 54.5  | 24.2   | 10.4  | 10.4  | 17.4  | 8.1   | 108.4   |
| Actuated g/C Ratio      | 0.14  | 0.61  | 0.61  | 0.58  | 0.50  | 0.50  | 0.22   | 0.10  | 0.10  | 0.16  | 0.07  | 1.00  |
| v/c Ratio               | 0.69  | 0.35  | 0.08  | 0.15  | 1.02  | 0.13  | 0.52   | 0.12  | 0.17  | 0.39  | 0.19  | 0.26  |
| Control Delay           | 53.3  | 12.7  | 1.2   | 8.5   | 54.7  | 1.5   | 41.3   | 47.9  | 1.1   | 39.8  | 53.3  | 0.4   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 53.3  | 12.7  | 1.2   | 8.5   | 54.7  | 1.5   | 41.3   | 47.9  | 1.1   | 39.8  | 53.3  | 0.4   |
| LOS                     | D   | B   | A   | A   | D   | A   | D  | D   | A   | D   | D   | A   |
| Approach Delay          |   | 23.7  |   |   | 50.1  |   |  | 33.4  |   |   | 10.4  |   |
| Approach LOS            |   | C   |   |   | D   |   |  | C   |   |   | B   |   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 108.4

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 35.8

Intersection LOS: D




Intersection Capacity Utilization 85.5%

ICU Level of Service E

Analysis Period (min) 15





Splits and Phases: 25: Golden Sage Rd & Woodmen Rd



| Intersection             |   |        |       |   |   |       |
|--------------------------|---|--------|-------|---|---|-------|
| Int Delay, s/veh         | 6.9   |        |       |   |   |       |
| Movement                 | EBT   | EBR    | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations      |  |        |       |  |  |       |
| Traffic Vol, veh/h       | 0   | 62     | 54    | 0   | 63  | 39    |
| Future Vol, veh/h        | 0   | 62     | 54    | 0   | 63  | 39    |
| Conflicting Peds, #/hr   | 0   | 0      | 0     | 0   | 0   | 0     |
| Sign Control             | Free  | Free   | Free  | Free  | Stop  | Stop  |
| RT Channelized           | -   | None   | -     | None  | -   | None  |
| Storage Length           | -   | -      | -     | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -      | -     | 0   | 0   | -     |
| Grade, %                 | 0   | -      | -     | 0   | 0   | -     |
| Peak Hour Factor         | 38  | 38     | 47    | 47  | 50  | 50    |
| Heavy Vehicles, %        | 2   | 2      | 2     | 2   | 2   | 2     |
| Mvmt Flow                | 0   | 163    | 115   | 0   | 126   | 78    |
| Major/Minor              | Major1  | Major2 |       | Minor1  |   |       |
| Conflicting Flow All     | 0   | 0      | 163   | 0   | 312   | 82    |
| Stage 1                  | -   | -      | -     | -   | 82  | -     |
| Stage 2                  | -   | -      | -     | -   | 230   | -     |
| Critical Hdwy            | -   | -      | 4.12  | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -      | -     | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -      | -     | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -      | 2.218 | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -      | 1416  | -   | 681   | 978   |
| Stage 1                  | -   | -      | -     | -   | 941   | -     |
| Stage 2                  | -   | -      | -     | -   | 808   | -     |
| Platoon blocked, %       | -   | -      | -     | -   | -   | -     |
| Mov Cap-1 Maneuver       | -   | -      | 1416  | -   | 626   | 978   |
| Mov Cap-2 Maneuver       | -   | -      | -     | -   | 626   | -     |
| Stage 1                  | -   | -      | -     | -   | 941   | -     |
| Stage 2                  | -   | -      | -     | -   | 743   | -     |
| Approach                 | EB  |        | WB    |   | NB  |       |
| HCM Control Delay, s     | 0   |        | 7.8   |   | 11.9  |       |
| HCM LOS                  |   |        |       |   | B   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT    | EBR   | WBL   | WBT   |       |
| Capacity (veh/h)         | 726   | -      | -     | 1416  | -   |       |
| HCM Lane V/C Ratio       | 0.281   | -      | -     | 0.081   | -   |       |
| HCM Control Delay (s)    | 11.9  | -      | -     | 7.8   | 0   |       |
| HCM Lane LOS             | B   | -      | -     | A   | A   |       |
| HCM 95th %tile Q(veh)    | 1.2   | -      | -     | 0.3   | -   |       |

























HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Long Term Background  
PM Peak Hour

| Intersection             |   |   |   |      |   |       |
|--------------------------|---|---|---|------|---|-------|
| Int Delay, s/veh         | 5.7   |   |   |      |   |       |
| Movement                 | EBL   | EBT   | WBT   | WBR  | SBL   | SBR   |
| Lane Configurations      |  |  |  |      |  |       |
| Traffic Vol, veh/h       | 75  | 150   | 203   | 19   | 26  | 86    |
| Future Vol, veh/h        | 75  | 150   | 203   | 19   | 26  | 86    |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0     |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop  |
| RT Channelized           | -   | None  | -   | None | -   | None  |
| Storage Length           | 0   | -   | -   | -    | 0   | -     |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -     |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -     |
| Peak Hour Factor         | 65  | 65  | 75  | 75   | 42  | 42    |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2     |
| Mvmt Flow                | 115   | 231   | 271   | 25   | 62  | 205   |
| Major/Minor              | Major1  | Major2  | Minor2  |      |   |       |
| Conflicting Flow All     | 296   | 0   | -   | 0    | 745   | 284   |
| Stage 1                  | -   | -   | -   | -    | 284   | -     |
| Stage 2                  | -   | -   | -   | -    | 461   | -     |
| Critical Hdwy            | 4.12  | -   | -   | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -   | -   | -    | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -   | -   | -    | 5.42  | -     |
| Follow-up Hdwy           | 2.218   | -   | -   | -    | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | 1265  | -   | -   | -    | 382   | 755   |
| Stage 1                  | -   | -   | -   | -    | 764   | -     |
| Stage 2                  | -   | -   | -   | -    | 635   | -     |
| Platoon blocked, %       |   | -   | -   | -    |   |       |
| Mov Cap-1 Maneuver       | 1265  | -   | -   | -    | 347   | 755   |
| Mov Cap-2 Maneuver       | -   | -   | -   | -    | 347   | -     |
| Stage 1                  | -   | -   | -   | -    | 694   | -     |
| Stage 2                  | -   | -   | -   | -    | 635   | -     |
| Approach                 | EB  | WB  |   | SB   |   |       |
| HCM Control Delay, s     | 2.7   | 0   |   | 15.9 |   |       |
| HCM LOS                  |   |   |   | C    |   |       |
| Minor Lane/Major Mvmt    | EBL   | EBT   | WBT   | WBR  | SBLn1   |       |
| Capacity (veh/h)         | 1265  | -   | -   | -    | 593   |       |
| HCM Lane V/C Ratio       | 0.091   | -   | -   | -    | 0.45  |       |
| HCM Control Delay (s)    | 8.1   | -   | -   | -    | 15.9  |       |
| HCM Lane LOS             | A   | -   | -   | -    | C   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -   | -   | -    | 2.3   |       |

Lanes, Volumes, Timings  
25: Golden Sage Rd & Woodmen Rd

Long Term Background  
PM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 447   | 1629  | 73  | 80  | 1083  | 121   | 174  | 39  | 67  | 136   | 20  | 391   |
| Future Volume (vph)     | 447   | 1629  | 73  | 80  | 1083  | 121   | 174  | 39  | 67  | 136   | 20  | 391   |
| Satd. Flow (prot)       | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770   | 1863  | 1583  | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.950   |   |   | 0.095   |   |   | 0.513  |   |   |   |   |   |
| Satd. Flow (perm)       | 3433  | 3539  | 1583  | 177   | 3539  | 1583  | 956  | 1863  | 1583  | 1863  | 1863  | 1583  |
| Satd. Flow (RTOR)       |   |   | 109   |   |   | 155   |  |   | 173   |   |   | 365   |
| Peak Hour Factor        | 0.95  | 0.98  | 0.95  | 0.95  | 0.98  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)   | 471   | 1662  | 77  | 84  | 1105  | 127   | 183  | 41  | 71  | 143   | 21  | 412   |
| Turn Type               | Prot  | NA  | Perm  | pm+pt   | NA  | Perm  | pm+pt  | NA  | Perm  | pm+pt   | NA  | Free  |
| Protected Phases        | 5   | 2   |   | 1   | 6   |   | 3  | 8   |   | 7   | 4   |   |
| Permitted Phases        |   |   | 2   | 6   |   | 6   | 8  |   | 8   | 4   |   | Free  |
| Detector Phase          | 5   | 2   | 2   | 1   | 6   | 6   | 3  | 8   | 8   | 7   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |   |
| Minimum Split (s)       | 10.0  | 12.0  | 12.0  | 10.0  | 12.0  | 12.0  | 10.0   | 10.0  | 10.0  | 10.0  | 10.0  |   |
| Total Split (s)         | 23.0  | 64.0  | 64.0  | 10.0  | 51.0  | 51.0  | 31.0   | 15.0  | 15.0  | 31.0  | 15.0  |   |
| Total Split (%)         | 19.2%   | 53.3%   | 53.3%   | 8.3%  | 42.5%   | 42.5%   | 25.8%  | 12.5%   | 12.5%   | 25.8%   | 12.5%   |   |
| Yellow Time (s)         | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   | 5.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0   | -1.0  | -1.0  | -1.0  | -1.0  |   |
| Total Lost Time (s)     | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   | 6.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead   | Lag   | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |   |
| Recall Mode             | None  | Min   | Min   | None  | Min   | Min   | None   | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 18.3  | 55.7  | 55.7  | 48.9  | 40.5  | 40.5  | 24.1   | 9.4   | 9.4   | 17.5  | 8.0   | 98.0  |
| Actuated g/C Ratio      | 0.19  | 0.57  | 0.57  | 0.50  | 0.41  | 0.41  | 0.25   | 0.10  | 0.10  | 0.18  | 0.08  | 1.00  |
| v/c Ratio               | 0.73  | 0.83  | 0.08  | 0.44  | 0.76  | 0.17  | 0.46   | 0.23  | 0.23  | 0.45  | 0.14  | 0.26  |
| Control Delay           | 47.9  | 24.2  | 1.3   | 20.2  | 29.4  | 2.6   | 35.4   | 48.6  | 1.7   | 39.5  | 49.2  | 0.4   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 47.9  | 24.2  | 1.3   | 20.2  | 29.4  | 2.6   | 35.4   | 48.6  | 1.7   | 39.5  | 49.2  | 0.4   |
| LOS                     | D   | C   | A   | C   | C   | A   | D  | D   | A   | D   | D   | A   |
| Approach Delay          |   | 28.5  |   |   | 26.2  |   |  | 29.1  |   |   | 11.9  |   |
| Approach LOS            |   | C   |   |   | C   |   |  | C   |   |   | B   |   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 98

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 25.7

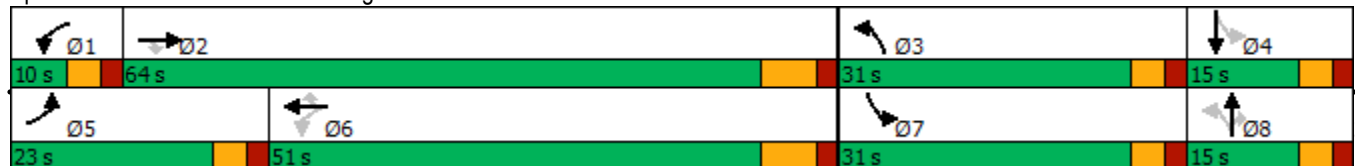
Intersection LOS: C

Intersection Capacity Utilization 77.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd








HCM 6th TWSC  
1: Firehouse View & Maltese Point

Short Term Total  
AM Peak Hour

Intersection

Int Delay, s/veh 7

| Movement                 | EBT   | EBR  | WBL  | WBT   | NBL   | NBR  |
|--------------------------|---|------|------|---|---|------|
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 1   | 1    | 5    | 1   | 9   | 24   |
| Future Vol, veh/h        | 1   | 1    | 5    | 1   | 9   | 24   |
| Conflicting Peds, #/hr   | 0   | 0    | 0    | 0   | 0   | 0    |
| Sign Control             | Free  | Free | Free | Free  | Stop  | Stop |
| RT Channelized           | -   | None | -    | None  | -   | None |
| Storage Length           | -   | -    | -    | -   | 0   | -    |
| Veh in Median Storage, # | 0   | -    | -    | 0   | 0   | -    |
| Grade, %                 | 0   | -    | -    | 0   | 0   | -    |
| Peak Hour Factor         | 25  | 25   | 75   | 75  | 81  | 81   |
| Heavy Vehicles, %        | 2   | 2    | 2    | 2   | 2   | 2    |
| Mvmt Flow                | 4   | 4    | 7    | 1   | 11  | 30   |





| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 8      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | -      | 4.12   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | -      | 2.218  |
| Pot Cap-1 Maneuver   | -      | -      | 1612   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 1612   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB | NB  |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0  | 6  | 8.6 |
| HCM LOS              |    |    | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 1052  | -   | -   | 1612  | -   |
| HCM Lane V/C Ratio    | 0.039 | -   | -   | 0.004 | -   |
| HCM Control Delay (s) | 8.6   | -   | -   | 7.2   | 0   |
| HCM Lane LOS          | A     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0     | -   |

HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Short Term Total  
AM Peak Hour

| Intersection             |   |   |   |      |   |      |
|--------------------------|---|---|---|------|---|------|
| Int Delay, s/veh         | 1.5   |   |   |      |   |      |
| Movement                 | EBL   | EBT   | WBT   | WBR  | SBL   | SBR  |
| Lane Configurations      |  |  |  |      |  |      |
| Traffic Vol, veh/h       | 44  | 55  | 153   | 10   | 2   | 7    |
| Future Vol, veh/h        | 44  | 55  | 153   | 10   | 2   | 7    |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0    |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop |
| RT Channelized           | -   | None  | -   | None | -   | None |
| Storage Length           | 0   | -   | -   | -    | 0   | -    |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -    |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -    |
| Peak Hour Factor         | 90  | 90  | 77  | 77   | 62  | 62   |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2    |
| Mvmt Flow                | 49  | 61  | 199   | 13   | 3   | 11   |

























| Major/Minor          | Major1 | Major2 | Minor2          |
|----------------------|--------|--------|-----------------|
| Conflicting Flow All | 212    | 0      | 0 365 206       |
| Stage 1              | -      | -      | - - 206 -       |
| Stage 2              | -      | -      | - - 159 -       |
| Critical Hdwy        | 4.12   | -      | - - 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | - - 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | - - 5.42 -      |
| Follow-up Hdwy       | 2.218  | -      | - - 3.518 3.318 |
| Pot Cap-1 Maneuver   | 1358   | -      | - - 635 835     |
| Stage 1              | -      | -      | - - 829 -       |
| Stage 2              | -      | -      | - - 870 -       |
| Platoon blocked, %   |        | -      | - -             |
| Mov Cap-1 Maneuver   | 1358   | -      | - - 612 835     |
| Mov Cap-2 Maneuver   | -      | -      | - - 612 -       |
| Stage 1              | -      | -      | - - 799 -       |
| Stage 2              | -      | -      | - - 870 -       |

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

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1358  | -   | -   | -   | 772   |
| HCM Lane V/C Ratio    | 0.036 | -   | -   | -   | 0.019 |
| HCM Control Delay (s) | 7.8   | -   | -   | -   | 9.8   |
| HCM Lane LOS          | A     | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.1   |

Lanes, Volumes, Timings  
25: Golden Sage & Woodmen

Short Term Total  
AM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 47  | 661   | 54  | 26  | 1475  | 83  | 140   | 13  | 5   | 53  | 21  | 112   |
| Future Volume (vph)     | 47  | 661   | 54  | 26  | 1475  | 83  | 140   | 13  | 5   | 53  | 21  | 112   |
| Satd. Flow (prot)       | 1770  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770  | 1863  | 1583  | 1770  | 1626  | 0   |
| Flt Permitted           | 0.093   |   |   | 0.373   |   |   | 0.613   |   |   | 0.747   |   |   |
| Satd. Flow (perm)       | 173   | 3539  | 1583  | 695   | 3539  | 1583  | 1142  | 1863  | 1583  | 1391  | 1626  | 0   |
| Satd. Flow (RTOR)       |   |   | 59  |   |   | 93  |   |   | 48  |   | 28  |   |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.89  | 0.89  | 0.89  | 0.81  | 0.81  | 0.81  | 0.83  | 0.83  | 0.83  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 51  | 718   | 59  | 29  | 1657  | 93  | 173   | 16  | 6   | 64  | 160   | 0   |
| Turn Type               | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm  | NA  |   |
| Protected Phases        |   | 2   |   |   | 6   |   |   | 8   |   |   | 4   |   |
| Permitted Phases        | 2   |   | 2   | 6   |   | 6   | 8   |   | 8   | 4   |   |   |
| Detector Phase          | 2   | 2   | 2   | 6   | 6   | 6   | 8   | 8   | 8   | 4   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Minimum Split (s)       | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 21.5  | 21.5  | 21.5  | 21.5  | 21.5  |   |
| Total Split (s)         | 62.0  | 62.0  | 62.0  | 62.0  | 62.0  | 62.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |   |
| Total Split (%)         | 68.9%   | 68.9%   | 68.9%   | 68.9%   | 68.9%   | 68.9%   | 31.1%   | 31.1%   | 31.1%   | 31.1%   | 31.1%   |   |
| Yellow Time (s)         | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Total Lost Time (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |   |
| Lead/Lag                |   |   |   |   |   |   |   |   |   |   |   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |   |   |   |   |   |   |
| Recall Mode             | Max   | Max   | Max   | Max   | Max   | Max   | None  | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 55.2  | 55.2  | 55.2  | 55.2  | 55.2  | 55.2  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |   |
| Actuated g/C Ratio      | 0.65  | 0.65  | 0.65  | 0.65  | 0.65  | 0.65  | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  |   |
| v/c Ratio               | 0.46  | 0.31  | 0.06  | 0.06  | 0.72  | 0.09  | 0.76  | 0.04  | 0.02  | 0.23  | 0.46  |   |
| Control Delay           | 25.9  | 7.4   | 2.1   | 7.1   | 12.8  | 1.9   | 53.1  | 26.4  | 0.0   | 29.8  | 28.5  |   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Total Delay             | 25.9  | 7.4   | 2.1   | 7.1   | 12.8  | 1.9   | 53.1  | 26.4  | 0.0   | 29.8  | 28.5  |   |
| LOS                     | C   | A   | A   | A   | B   | A   | D   | C   | A   | C   | C   |   |
| Approach Delay          |   | 8.2   |   |   | 12.1  |   |   | 49.3  |   |   | 28.8  |   |
| Approach LOS            |   | A   |   |   | B   |   |   | D   |   |   | C   |   |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 84.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.7

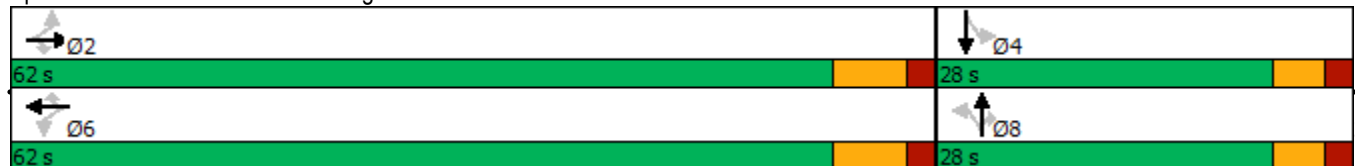
Intersection LOS: B

Intersection Capacity Utilization 71.5%

ICU Level of Service C




Analysis Period (min) 15

Splits and Phases: 25: Golden Sage & Woodmen



HCM 6th TWSC  
1: Firehouse View & Maltese Point

Short Term Total  
PM Peak Hour

| Intersection             |   |        |       |   |   |       |
|--------------------------|---|--------|-------|---|---|-------|
| Int Delay, s/veh         | 4.4   |        |       |   |   |       |
| Movement                 | EBT   | EBR    | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations      |  |        |       |  |  |       |
| Traffic Vol, veh/h       | 0   | 44     | 17    | 0   | 36  | 2     |
| Future Vol, veh/h        | 0   | 44     | 17    | 0   | 36  | 2     |
| Conflicting Peds, #/hr   | 0   | 0      | 0     | 0   | 0   | 0     |
| Sign Control             | Free  | Free   | Free  | Free  | Stop  | Stop  |
| RT Channelized           | -   | None   | -     | None  | -   | None  |
| Storage Length           | -   | -      | -     | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -      | -     | 0   | 0   | -     |
| Grade, %                 | 0   | -      | -     | 0   | 0   | -     |
| Peak Hour Factor         | 38  | 38     | 47    | 47  | 50  | 50    |
| Heavy Vehicles, %        | 2   | 2      | 2     | 2   | 2   | 2     |
| Mvmt Flow                | 0   | 116    | 36    | 0   | 72  | 4     |
| Major/Minor              | Major1  | Major2 |       | Minor1  |   |       |
| Conflicting Flow All     | 0   | 0      | 116   | 0   | 130   | 58    |
| Stage 1                  | -   | -      | -     | -   | 58  | -     |
| Stage 2                  | -   | -      | -     | -   | 72  | -     |
| Critical Hdwy            | -   | -      | 4.12  | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -      | -     | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -      | -     | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -      | 2.218 | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -      | 1473  | -   | 864   | 1008  |
| Stage 1                  | -   | -      | -     | -   | 965   | -     |
| Stage 2                  | -   | -      | -     | -   | 951   | -     |
| Platoon blocked, %       | -   | -      | -     | -   | -   | -     |
| Mov Cap-1 Maneuver       | -   | -      | 1473  | -   | 843   | 1008  |
| Mov Cap-2 Maneuver       | -   | -      | -     | -   | 843   | -     |
| Stage 1                  | -   | -      | -     | -   | 965   | -     |
| Stage 2                  | -   | -      | -     | -   | 928   | -     |
| Approach                 | EB  |        | WB    |   | NB  |       |
| HCM Control Delay, s     | 0   |        | 7.5   |   | 9.7   |       |
| HCM LOS                  |   |        |       |   | A   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT    | EBR   | WBL   | WBT   |       |
| Capacity (veh/h)         | 850   | -      | -     | 1473  | -   |       |
| HCM Lane V/C Ratio       | 0.089   | -      | -     | 0.025   | -   |       |
| HCM Control Delay (s)    | 9.7   | -      | -     | 7.5   | 0   |       |
| HCM Lane LOS             | A   | -      | -     | A   | A   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -      | -     | 0.1   | -   |       |





HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Short Term Total  
PM Peak Hour

Intersection

Int Delay, s/veh 4.5

Movement EBL EBT WBT WBR SBL SBR

|                          |   |   |   |      |   |      |
|--------------------------|---|---|---|------|---|------|
| Lane Configurations      |  |  |  |      |  |      |
| Traffic Vol, veh/h       | 28  | 78  | 118   | 6    | 18  | 58   |
| Future Vol, veh/h        | 28  | 78  | 118   | 6    | 18  | 58   |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0    |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop |
| RT Channelized           | -   | None  | -   | None | -   | None |
| Storage Length           | 0   | -   | -   | -    | 0   | -    |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -    |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -    |
| Peak Hour Factor         | 65  | 65  | 75  | 75   | 42  | 42   |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2    |
| Mvmt Flow                | 43  | 120   | 157   | 8    | 43  | 138  |

Major/Minor Major1 Major2 Minor2

|                      |       |   |   |   |       |       |
|----------------------|-------|---|---|---|-------|-------|
| Conflicting Flow All | 165   | 0 | - | 0 | 367   | 161   |
| Stage 1              | -     | - | - | - | 161   | -     |
| Stage 2              | -     | - | - | - | 206   | -     |
| Critical Hdwy        | 4.12  | - | - | - | 6.42  | 6.22  |
| Critical Hdwy Stg 1  | -     | - | - | - | 5.42  | -     |
| Critical Hdwy Stg 2  | -     | - | - | - | 5.42  | -     |
| Follow-up Hdwy       | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver   | 1413  | - | - | - | 633   | 884   |
| Stage 1              | -     | - | - | - | 868   | -     |
| Stage 2              | -     | - | - | - | 829   | -     |
| Platoon blocked, %   |       | - | - | - |       |       |
| Mov Cap-1 Maneuver   | 1413  | - | - | - | 614   | 884   |
| Mov Cap-2 Maneuver   | -     | - | - | - | 614   | -     |
| Stage 1              | -     | - | - | - | 842   | -     |
| Stage 2              | -     | - | - | - | 829   | -     |

Approach EB WB SB

























|                      |   |   |      |
|----------------------|---|---|------|
| HCM Control Delay, s | 2 | 0 | 10.8 |
| HCM LOS              |   |   | B    |

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

|                       |      |   |   |   |       |
|-----------------------|------|---|---|---|-------|
| Capacity (veh/h)      | 1413 | - | - | - | 801   |
| HCM Lane V/C Ratio    | 0.03 | - | - | - | 0.226 |
| HCM Control Delay (s) | 7.6  | - | - | - | 10.8  |
| HCM Lane LOS          | A    | - | - | - | B     |
| HCM 95th %tile Q(veh) | 0.1  | - | - | - | 0.9   |

Lanes, Volumes, Timings  
25: Golden Sage & Woodmen

Short Term Total  
PM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 88  | 1345  | 46  | 21  | 875   | 67  | 114  | 29  | 33  | 96  | 13  | 94  |
| Future Volume (vph)     | 88  | 1345  | 46  | 21  | 875   | 67  | 114  | 29  | 33  | 96  | 13  | 94  |
| Satd. Flow (prot)       | 1770  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770   | 1863  | 1583  | 1770  | 1617  | 0   |
| Flt Permitted           | 0.274   |   |   | 0.134   |   |   | 0.532  |   |   | 0.734   |   |   |
| Satd. Flow (perm)       | 510   | 3539  | 1583  | 250   | 3539  | 1583  | 991  | 1863  | 1583  | 1367  | 1617  | 0   |
| Satd. Flow (RTOR)       |   |   | 50  |   |   | 72  |  |   | 48  |   | 168   |   |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.93  | 0.93  | 0.93  | 0.83   | 0.83  | 0.83  | 0.56  | 0.56  | 0.56  |
| Growth Factor           | 90%   | 100%  | 100%  | 100%  | 100%  | 100%  | 100%   | 100%  | 100%  | 100%  | 100%  | 100%  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)   | 86  | 1462  | 50  | 23  | 941   | 72  | 137  | 35  | 40  | 171   | 191   | 0   |
| Turn Type               | Perm  | NA  | Perm  | Perm  | NA  | Perm  | Perm   | NA  | Perm  | Perm  | NA  |   |
| Protected Phases        |   | 2   |   |   | 6   |   |  | 8   |   |   | 4   |   |
| Permitted Phases        | 2   |   | 2   | 6   |   | 6   | 8  |   | 8   | 4   |   |   |
| Detector Phase          | 2   | 2   | 2   | 6   | 6   | 6   | 8  | 8   | 8   | 4   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Minimum Split (s)       | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 21.5   | 21.5  | 21.5  | 21.5  | 21.5  |   |
| Total Split (s)         | 64.0  | 64.0  | 64.0  | 64.0  | 64.0  | 64.0  | 26.0   | 26.0  | 26.0  | 26.0  | 26.0  |   |
| Total Split (%)         | 71.1%   | 71.1%   | 71.1%   | 71.1%   | 71.1%   | 71.1%   | 28.9%  | 28.9%   | 28.9%   | 28.9%   | 28.9%   |   |
| Yellow Time (s)         | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 3.5  | 3.5   | 3.5   | 3.5   | 3.5   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | 0.0   | -3.0  | -3.0  | -1.0  | -3.0  | -3.0  | -1.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Total Lost Time (s)     | 7.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   | 4.5  | 5.5   | 5.5   | 5.5   | 5.5   |   |
| Lead/Lag                |   |   |   |   |   |   |  |   |   |   |   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |  |   |   |   |   |   |
| Recall Mode             | Max   | Max   | Max   | Max   | Max   | Max   | None   | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 57.2  | 60.2  | 60.2  | 58.2  | 60.2  | 60.2  | 16.7   | 15.7  | 15.7  | 15.7  | 15.7  |   |
| Actuated g/C Ratio      | 0.67  | 0.70  | 0.70  | 0.68  | 0.70  | 0.70  | 0.20   | 0.18  | 0.18  | 0.18  | 0.18  |   |
| v/c Ratio               | 0.25  | 0.59  | 0.04  | 0.14  | 0.38  | 0.06  | 0.71   | 0.10  | 0.12  | 0.68  | 0.44  |   |
| Control Delay           | 9.1   | 8.1   | 1.7   | 8.3   | 6.1   | 1.5   | 52.2   | 28.8  | 8.1   | 46.6  | 10.2  |   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Total Delay             | 9.1   | 8.1   | 1.7   | 8.3   | 6.1   | 1.5   | 52.2   | 28.8  | 8.1   | 46.6  | 10.2  |   |
| LOS                     | A   | A   | A   | A   | A   | A   | D  | C   | A   | D   | B   |   |
| Approach Delay          |   | 8.0   |   |   | 5.8   |   |  | 40.0  |   |   | 27.4  |   |
| Approach LOS            |   | A   |   |   | A   |   |  | D   |   |   | C   |   |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 85.4

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 11.6

Intersection LOS: B

Intersection Capacity Utilization 66.4%

ICU Level of Service C




Analysis Period (min) 15

Splits and Phases: 25: Golden Sage & Woodmen







HCM 6th TWSC  
1: Firehouse View & Maltese Point

Long Term Total  
AM Peak Hour

| Intersection             |   |        |       |   |   |       |
|--------------------------|---|--------|-------|---|---|-------|
| Int Delay, s/veh         | 6   |        |       |   |   |       |
| Movement                 | EBT   | EBR    | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations      |  |        |       |  |  |       |
| Traffic Vol, veh/h       | 1   | 12     | 24    | 1   | 23  | 53    |
| Future Vol, veh/h        | 1   | 12     | 24    | 1   | 23  | 53    |
| Conflicting Peds, #/hr   | 0   | 0      | 0     | 0   | 0   | 0     |
| Sign Control             | Free  | Free   | Free  | Free  | Stop  | Stop  |
| RT Channelized           | -   | None   | -     | None  | -   | None  |
| Storage Length           | -   | -      | -     | -   | 0   | -     |
| Veh in Median Storage, # | 0   | -      | -     | 0   | 0   | -     |
| Grade, %                 | 0   | -      | -     | 0   | 0   | -     |
| Peak Hour Factor         | 25  | 25     | 75    | 75  | 81  | 81    |
| Heavy Vehicles, %        | 2   | 2      | 2     | 2   | 2   | 2     |
| Mvmt Flow                | 4   | 48     | 32    | 1   | 28  | 65    |
| Major/Minor              | Major1  | Major2 |       | Minor1  |   |       |
| Conflicting Flow All     | 0   | 0      | 52    | 0   | 93  | 28    |
| Stage 1                  | -   | -      | -     | -   | 28  | -     |
| Stage 2                  | -   | -      | -     | -   | 65  | -     |
| Critical Hdwy            | -   | -      | 4.12  | -   | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -      | -     | -   | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -      | -     | -   | 5.42  | -     |
| Follow-up Hdwy           | -   | -      | 2.218 | -   | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | -   | -      | 1554  | -   | 907   | 1047  |
| Stage 1                  | -   | -      | -     | -   | 995   | -     |
| Stage 2                  | -   | -      | -     | -   | 958   | -     |
| Platoon blocked, %       | -   | -      | -     | -   | -   | -     |
| Mov Cap-1 Maneuver       | -   | -      | 1554  | -   | 888   | 1047  |
| Mov Cap-2 Maneuver       | -   | -      | -     | -   | 888   | -     |
| Stage 1                  | -   | -      | -     | -   | 995   | -     |
| Stage 2                  | -   | -      | -     | -   | 938   | -     |
| Approach                 | EB  |        | WB    |   | NB  |       |
| HCM Control Delay, s     | 0   |        | 7.1   |   | 9   |       |
| HCM LOS                  |   |        |       |   | A   |       |
| Minor Lane/Major Mvmt    | NBLn1   | EBT    | EBR   | WBL   | WBT   |       |
| Capacity (veh/h)         | 993   | -      | -     | 1554  | -   |       |
| HCM Lane V/C Ratio       | 0.094   | -      | -     | 0.021   | -   |       |
| HCM Control Delay (s)    | 9   | -      | -     | 7.4   | 0   |       |
| HCM Lane LOS             | A   | -      | -     | A   | A   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -      | -     | 0.1   | -   |       |

HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

























Long Term Total  
AM Peak Hour

| Intersection             |   |   |   |        |   |       |
|--------------------------|---|---|---|--------|---|-------|
| Int Delay, s/veh         | 2.7   |   |   |        |   |       |
| Movement                 | EBL   | EBT   | WBT   | WBR    | SBL   | SBR   |
| Lane Configurations      |  |  |  |        |  |       |
| Traffic Vol, veh/h       | 77  | 118   | 174   | 20     | 10  | 35    |
| Future Vol, veh/h        | 77  | 118   | 174   | 20     | 10  | 35    |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0      | 0   | 0     |
| Sign Control             | Free  | Free  | Free  | Free   | Stop  | Stop  |
| RT Channelized           | -   | None  | -   | None   | -   | None  |
| Storage Length           | 0   | -   | -   | -      | 0   | -     |
| Veh in Median Storage, # | -   | 0   | 0   | -      | 0   | -     |
| Grade, %                 | -   | 0   | 0   | -      | 0   | -     |
| Peak Hour Factor         | 90  | 90  | 77  | 77     | 62  | 62    |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2      | 2   | 2     |
| Mvmt Flow                | 86  | 131   | 226   | 26     | 16  | 56    |
|                          |   |   |   |        |   |       |
| Major/Minor              | Major1  | Major2  |   | Minor2 |   |       |
| Conflicting Flow All     | 252   | 0   | -   | 0      | 542   | 239   |
| Stage 1                  | -   | -   | -   | -      | 239   | -     |
| Stage 2                  | -   | -   | -   | -      | 303   | -     |
| Critical Hdwy            | 4.12  | -   | -   | -      | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -   | -   | -      | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -   | -   | -      | 5.42  | -     |
| Follow-up Hdwy           | 2.218   | -   | -   | -      | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | 1313  | -   | -   | -      | 501   | 800   |
| Stage 1                  | -   | -   | -   | -      | 801   | -     |
| Stage 2                  | -   | -   | -   | -      | 749   | -     |
| Platoon blocked, %       |   | -   | -   | -      |   |       |
| Mov Cap-1 Maneuver       | 1313  | -   | -   | -      | 468   | 800   |
| Mov Cap-2 Maneuver       | -   | -   | -   | -      | 468   | -     |
| Stage 1                  | -   | -   | -   | -      | 749   | -     |
| Stage 2                  | -   | -   | -   | -      | 749   | -     |
|                          |   |   |   |        |   |       |
| Approach                 | EB  | WB  |   | SB     |   |       |
| HCM Control Delay, s     | 3.1   | 0   |   | 10.8   |   |       |
| HCM LOS                  |   |   |   | B      |   |       |
|                          |   |   |   |        |   |       |
| Minor Lane/Major Mvmt    | EBL   | EBT   | WBT   | WBR    | SBLn1   |       |
| Capacity (veh/h)         | 1313  | -   | -   | -      | -   | 691   |
| HCM Lane V/C Ratio       | 0.065   | -   | -   | -      | -   | 0.105 |
| HCM Control Delay (s)    | 7.9   | -   | -   | -      | -   | 10.8  |
| HCM Lane LOS             | A   | -   | -   | -      | -   | B     |
| HCM 95th %tile Q(veh)    | 0.2   | -   | -   | -      | -   | 0.4   |



Lanes, Volumes, Timings  
25: Golden Sage Rd & Woodmen Rd

Long Term Total  
AM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 319   | 734   | 84  | 77  | 1776  | 110   | 163   | 20  | 50  | 98  | 26  | 392   |
| Future Volume (vph)     | 319   | 734   | 84  | 77  | 1776  | 110   | 163   | 20  | 50  | 98  | 26  | 392   |
| Satd. Flow (prot)       | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770  | 1863  | 1583  | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.950   |   |   | 0.367   |   |   | 0.431   |   |   | 0.744   |   |   |
| Satd. Flow (perm)       | 3433  | 3539  | 1583  | 684   | 3539  | 1583  | 803   | 1863  | 1583  | 1386  | 1863  | 1583  |
| Satd. Flow (RTOR)       |   |   | 109   |   |   | 155   |   |   | 173   |   |   | 272   |
| Peak Hour Factor        | 0.95  | 0.98  | 0.95  | 0.95  | 0.98  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 336   | 749   | 88  | 81  | 1812  | 116   | 172   | 21  | 53  | 103   | 27  | 413   |
| Turn Type               | Prot  | NA  | Perm  | pm+pt   | NA  | Perm  | pm+pt   | NA  | Perm  | pm+pt   | NA  | Free  |
| Protected Phases        | 5   | 2   |   | 1   | 6   |   | 3   | 8   |   | 7   | 4   |   |
| Permitted Phases        |   |   | 2   | 6   |   | 6   | 8   |   | 8   | 4   |   | Free  |
| Detector Phase          | 5   | 2   | 2   | 1   | 6   | 6   | 3   | 8   | 8   | 7   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   |
| Minimum Split (s)       | 10.0  | 12.0  | 12.0  | 10.0  | 12.0  | 12.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |   |
| Total Split (s)         | 21.0  | 72.0  | 72.0  | 10.0  | 61.0  | 61.0  | 23.0  | 15.0  | 15.0  | 23.0  | 15.0  |   |
| Total Split (%)         | 17.5%   | 60.0%   | 60.0%   | 8.3%  | 50.8%   | 50.8%   | 19.2%   | 12.5%   | 12.5%   | 19.2%   | 12.5%   |   |
| Yellow Time (s)         | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   | 5.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  |   |
| Total Lost Time (s)     | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   | 6.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |   |
| Recall Mode             | None  | Min   | Min   | None  | Min   | Min   | None  | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 15.5  | 67.3  | 67.3  | 63.6  | 55.5  | 55.5  | 24.1  | 10.3  | 10.3  | 17.6  | 8.2   | 109.4   |
| Actuated g/C Ratio      | 0.14  | 0.62  | 0.62  | 0.58  | 0.51  | 0.51  | 0.22  | 0.09  | 0.09  | 0.16  | 0.07  | 1.00  |
| v/c Ratio               | 0.69  | 0.34  | 0.09  | 0.18  | 1.01  | 0.13  | 0.53  | 0.12  | 0.17  | 0.39  | 0.19  | 0.26  |
| Control Delay           | 54.0  | 12.6  | 1.6   | 8.5   | 52.4  | 1.5   | 42.2  | 48.6  | 1.2   | 40.3  | 53.7  | 0.4   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 54.0  | 12.6  | 1.6   | 8.5   | 52.4  | 1.5   | 42.2  | 48.6  | 1.2   | 40.3  | 53.7  | 0.4   |
| LOS                     | D   | B   | A   | A   | D   | A   | D   | D   | A   | D   | D   | A   |
| Approach Delay          |   | 23.6  |   |   | 47.7  |   |   | 33.9  |   |   | 10.6  |   |
| Approach LOS            |   | C   |   |   | D   |   |   | C   |   |   | B   |   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 109.4

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 34.6

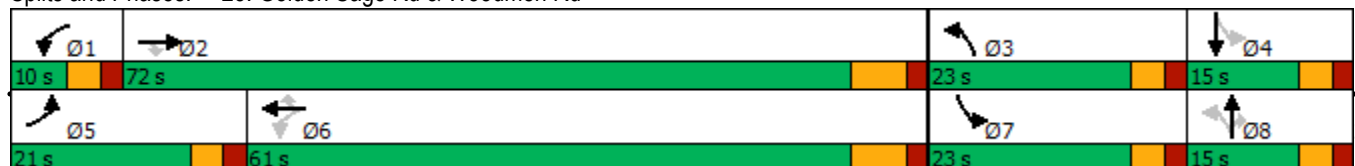
Intersection LOS: C

Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd






HCM 6th TWSC  
1: Firehouse View & Maltese Point

Long Term Total  
PM Peak Hour

Intersection

Int Delay, s/veh 6.8

| Movement                 | EBT   | EBR  | WBL  | WBT   | NBL   | NBR  |
|--------------------------|---|------|------|---|---|------|
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 0   | 68   | 54   | 0   | 65  | 39   |
| Future Vol, veh/h        | 0   | 68   | 54   | 0   | 65  | 39   |
| Conflicting Peds, #/hr   | 0   | 0    | 0    | 0   | 0   | 0    |
| Sign Control             | Free  | Free | Free | Free  | Stop  | Stop |
| RT Channelized           | -   | None | -    | None  | -   | None |
| Storage Length           | -   | -    | -    | -   | 0   | -    |
| Veh in Median Storage, # | 0   | -    | -    | 0   | 0   | -    |
| Grade, %                 | 0   | -    | -    | 0   | 0   | -    |
| Peak Hour Factor         | 38  | 38   | 47   | 47  | 50  | 50   |
| Heavy Vehicles, %        | 2   | 2    | 2    | 2   | 2   | 2    |
| Mvmt Flow                | 0   | 179  | 115  | 0   | 130   | 78   |





| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 179    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | -      | 4.12   |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | -      | 2.218  |
| Pot Cap-1 Maneuver   | -      | -      | 1397   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 1397   |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 7.8 | 12.1 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 715   | -   | -   | 1397  | -   |
| HCM Lane V/C Ratio    | 0.291 | -   | -   | 0.082 | -   |
| HCM Control Delay (s) | 12.1  | -   | -   | 7.8   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.2   | -   | -   | 0.3   | -   |

























HCM 6th TWSC  
2: Rolling Thunder & Firehouse View

Long Term Total  
PM Peak Hour

| Intersection             |   |   |   |      |   |       |
|--------------------------|---|---|---|------|---|-------|
| Int Delay, s/veh         | 7.2   |   |   |      |   |       |
| Movement                 | EBL   | EBT   | WBT   | WBR  | SBL   | SBR   |
| Lane Configurations      |  |  |  |      |  |       |
| Traffic Vol, veh/h       | 80  | 150   | 203   | 20   | 31  | 106   |
| Future Vol, veh/h        | 80  | 150   | 203   | 20   | 31  | 106   |
| Conflicting Peds, #/hr   | 0   | 0   | 0   | 0    | 0   | 0     |
| Sign Control             | Free  | Free  | Free  | Free | Stop  | Stop  |
| RT Channelized           | -   | None  | -   | None | -   | None  |
| Storage Length           | 0   | -   | -   | -    | 0   | -     |
| Veh in Median Storage, # | -   | 0   | 0   | -    | 0   | -     |
| Grade, %                 | -   | 0   | 0   | -    | 0   | -     |
| Peak Hour Factor         | 65  | 65  | 75  | 75   | 42  | 42    |
| Heavy Vehicles, %        | 2   | 2   | 2   | 2    | 2   | 2     |
| Mvmt Flow                | 123   | 231   | 271   | 27   | 74  | 252   |
| Major/Minor              | Major1  | Major2  | Minor2  |      |   |       |
| Conflicting Flow All     | 298   | 0   | -   | 0    | 762   | 285   |
| Stage 1                  | -   | -   | -   | -    | 285   | -     |
| Stage 2                  | -   | -   | -   | -    | 477   | -     |
| Critical Hdwy            | 4.12  | -   | -   | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1      | -   | -   | -   | -    | 5.42  | -     |
| Critical Hdwy Stg 2      | -   | -   | -   | -    | 5.42  | -     |
| Follow-up Hdwy           | 2.218   | -   | -   | -    | 3.518   | 3.318 |
| Pot Cap-1 Maneuver       | 1263  | -   | -   | -    | 373   | 754   |
| Stage 1                  | -   | -   | -   | -    | 763   | -     |
| Stage 2                  | -   | -   | -   | -    | 624   | -     |
| Platoon blocked, %       |   | -   | -   | -    |   |       |
| Mov Cap-1 Maneuver       | 1263  | -   | -   | -    | 337   | 754   |
| Mov Cap-2 Maneuver       | -   | -   | -   | -    | 337   | -     |
| Stage 1                  | -   | -   | -   | -    | 689   | -     |
| Stage 2                  | -   | -   | -   | -    | 624   | -     |
| Approach                 | EB  | WB  |   | SB   |   |       |
| HCM Control Delay, s     | 2.8   | 0   |   | 18.4 |   |       |
| HCM LOS                  |   |   |   | C    |   |       |
| Minor Lane/Major Mvmt    | EBL   | EBT   | WBT   | WBR  | SBLn1   |       |
| Capacity (veh/h)         | 1263  | -   | -   | -    | 589   |       |
| HCM Lane V/C Ratio       | 0.097   | -   | -   | -    | 0.554   |       |
| HCM Control Delay (s)    | 8.2   | -   | -   | -    | 18.4  |       |
| HCM Lane LOS             | A   | -   | -   | -    | C   |       |
| HCM 95th %tile Q(veh)    | 0.3   | -   | -   | -    | 3.4   |       |

Lanes, Volumes, Timings  
25: Golden Sage Rd & Woodmen Rd

Long Term Total  
PM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 447   | 1629  | 75  | 83  | 1083  | 121   | 183  | 40  | 77  | 136   | 21  | 391   |
| Future Volume (vph)     | 447   | 1629  | 75  | 83  | 1083  | 121   | 183  | 40  | 77  | 136   | 21  | 391   |
| Satd. Flow (prot)       | 3433  | 3539  | 1583  | 1770  | 3539  | 1583  | 1770   | 1863  | 1583  | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.950   |   |   | 0.095   |   |   | 0.506  |   |   |   |   |   |
| Satd. Flow (perm)       | 3433  | 3539  | 1583  | 177   | 3539  | 1583  | 943  | 1863  | 1583  | 1863  | 1863  | 1583  |
| Satd. Flow (RTOR)       |   |   | 109   |   |   | 155   |  |   | 173   |   |   | 357   |
| Peak Hour Factor        | 0.95  | 0.98  | 0.95  | 0.95  | 0.98  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)   | 471   | 1662  | 79  | 87  | 1105  | 127   | 193  | 42  | 81  | 143   | 22  | 412   |
| Turn Type               | Prot  | NA  | Perm  | pm+pt   | NA  | Perm  | pm+pt  | NA  | Perm  | pm+pt   | NA  | Free  |
| Protected Phases        | 5   | 2   |   | 1   | 6   |   | 3  | 8   |   | 7   | 4   |   |
| Permitted Phases        |   |   | 2   | 6   |   | 6   | 8  |   | 8   | 4   |   | Free  |
| Detector Phase          | 5   | 2   | 2   | 1   | 6   | 6   | 3  | 8   | 8   | 7   | 4   |   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   | 5.0   | 5.0   |   |
| Minimum Split (s)       | 10.0  | 12.0  | 12.0  | 10.0  | 12.0  | 12.0  | 10.0   | 10.0  | 10.0  | 10.0  | 10.0  |   |
| Total Split (s)         | 23.0  | 64.0  | 64.0  | 10.0  | 51.0  | 51.0  | 31.0   | 15.0  | 15.0  | 31.0  | 15.0  |   |
| Total Split (%)         | 19.2%   | 53.3%   | 53.3%   | 8.3%  | 42.5%   | 42.5%   | 25.8%  | 12.5%   | 12.5%   | 25.8%   | 12.5%   |   |
| Yellow Time (s)         | 3.0   | 5.0   | 5.0   | 3.0   | 5.0   | 5.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lost Time Adjust (s)    | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0  | -1.0   | -1.0  | -1.0  | -1.0  | -1.0  |   |
| Total Lost Time (s)     | 4.0   | 6.0   | 6.0   | 4.0   | 6.0   | 6.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead   | Lag   | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |   |
| Recall Mode             | None  | Min   | Min   | None  | Min   | Min   | None   | None  | None  | None  | None  |   |
| Act Effect Green (s)    | 18.6  | 55.9  | 55.9  | 48.9  | 40.5  | 40.5  | 24.9   | 9.6   | 9.6   | 17.7  | 8.0   | 98.8  |
| Actuated g/C Ratio      | 0.19  | 0.57  | 0.57  | 0.49  | 0.41  | 0.41  | 0.25   | 0.10  | 0.10  | 0.18  | 0.08  | 1.00  |
| v/c Ratio               | 0.73  | 0.83  | 0.08  | 0.46  | 0.76  | 0.17  | 0.47   | 0.23  | 0.26  | 0.45  | 0.15  | 0.26  |
| Control Delay           | 47.9  | 24.6  | 1.4   | 21.5  | 29.9  | 2.6   | 35.6   | 48.5  | 2.1   | 39.3  | 49.7  | 0.4   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 47.9  | 24.6  | 1.4   | 21.5  | 29.9  | 2.6   | 35.6   | 48.5  | 2.1   | 39.3  | 49.7  | 0.4   |
| LOS                     | D   | C   | A   | C   | C   | A   | D  | D   | A   | D   | D   | A   |
| Approach Delay          |   | 28.7  |   |   | 26.7  |   |  | 28.7  |   |   | 11.9  |   |
| Approach LOS            |   | C   |   |   | C   |   |  | C   |   |   | B   |   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 98.8

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 25.9

Intersection LOS: C

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd

